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Commuter and Express Bus Service in the SCAG Region:

A Policy Analysis of Public and Private Operations

February 1982

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COMMUTER AND EXPRESS BUS SERVICE IN THE SCAG REGION:

A POLICY ANALYSIS OF PUBLIC AND PRIVATE OPERATIONS



February 1982

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

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TRANSIT SECTION

This study was funded in part by a grant from
the Urban Mass Transportation Administration.

COMMUTER/EXPRESS BUS STUDY

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INTRODUCTION

In many cities, public transit services are supplemented by commuter runs operated by private providers during peak periods. The Los Angeles, California area has some fourteen private operators who provide such commuter services, in addition to six public operators providing express or subscription services during peak periods.

Some operators have inquired about use of such privately run services, operating in conjunction with their own, for "peak shedding"--that is, handling demand in excess of their public system's capacity during peak periods. This provides the public operator the option of sizing his fleet smaller, and reduces operating costs associated with providing those services.

This analysis was done by the Los Angeles area's planning agency, the Southern California Association of Governments, to investigate the potential of various public-private arrangements. Although specific to the Los Angeles area, this report may stimulate ideas in other areas on how to make the public services that are provided more efficient, and how to take full advantage of the presence of private sector providers.

One analytical caution is in order. Since the costing models and equations used in the report are specific to the Los Angeles area in the form used, they are probably not directly applicable to other areas. Readers who are interested in performing similar analyses can use the costing methods described in the Urban Mass Transportation Administration's report Bus Route Costing Procedures. (This document is available for \$4.75 from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. Please specify its stock number 050-000-00203-9 when ordering.)

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EXECUTIVE SUMMARY

COMMUTER AND EXPRESS BUS SERVICE IN THE SCAG REGION: A POLICY ANALYSIS OF PUBLIC AND PRIVATE OPERATIONS

INTRODUCTION

This report on SCAG region commuter and express bus services is the product of a ten-month study effort. A special task force, consisting of private bus operators, public transit authorities and planning, funding, and regulating agencies gave technical assistance and policy recommendations to the SCAG Transit Section in the conduct of the analysis. The report covers the following areas:

- The current (1981) extent of commuter/express bus service and ridership.
- The economics of commuter/express bus service - a comparison of public and private cost and revenue structures.
- The institutional and regulatory issues affecting public and private provision of commuter bus transportation.
- Evaluation of alternative public and private operating scenarios.
- Conclusions and policy recommendations.

THE CURRENT EXTENT OF COMMUTER/EXPRESS BUS SERVICE AND RIDERSHIP

The Public Sector

Six public agencies provide sixty-eight express and eleven subscription routes.

<u>Public Transit Agency</u>	<u>Express Routes</u>	<u>Subscription Routes</u>
Southern California Rapid Transit District	56	11
Orange County Transit District	7	
Torrance Transit	2	
Gardena Transit	1	
Long Beach Transit	1	
Torrance Transit	1	

Four hundred eighty two buses are operated on various freeways during the three-hour peak period from 6:00 a.m. to 9:00 a.m.. 70,900 boardings are made on express buses every weekday.

<u>Corridor</u>	<u>Daily Boardings</u>
Pasadena Freeway	2,800
Hollywood Freeway	12,000
Harbor Freeway	5,900
Santa Ana Freeway	5,800
Long Beach Freeway	3,500
Golden State Freeway	1,700
Santa Monica Freeway	4,400
San Diego Freeway	1,800
Pomona Freeway	3,500

The Private Sector

Fourteen private bus companies operate 132 routes. Commuter Bus Lines is the largest with 67 buses.

<u>Private Transit Company</u>	<u>Number of routes</u>
Commuter Bus Lines	49
Antelope Valley Bus, Inc.	31
Com-Bus	28
Hunt Transportation	7
Mark IV	5
Get-a-way	2
Orange Blossom Lines	2
Sunday Bus Lines	2
American Charter	1
Breland	1
Conejo Coach	1
Gene Stich/Challenge Coach	1
Hunt Transportation	1
Sundance Lines	1

Approximately 140 buses are operated over various freeways and other routes during the three-hour peak period from 6:00 a.m. to 9:00 a.m., and 5,000 people ride them daily.

Assessment

Public operators dominate freeway corridors bound for the Los Angeles central business district while private operators dominate non-downtown niches not well served by public carriers. Examples of the latter are the Ventura to El Segundo route and the San Diego and Riverside Freeways. Private bus routes are typically longer than public. Good geographical coverage is provided by the combination of public and private operators.

THE ECONOMICS OF COMMUTER/EXPRESS BUS SERVICE

Operating Costs

Estimates of operating costs on twenty two SCRTD and OCTD express/commuter routes were made for both public and private operators. For the SCRTD routes, a three variable cost allocation model was used. The variables used to predict cost of operating a route are vehicle miles, vehicle hours, and vehicles. OCTD's own cost model which is similar to the Los Angeles model was used to determine the costs of the OCTD routes.

For the private operators, a questionnaire was sent out asking for cost "bids" on nine publicly operated routes. For other routes, the private sector costs were then estimated by applying a factor of \$2.79 per revenue vehicle mile, the mean of costs submitted by the private operators for the routes bid upon.

The results of this costing exercise as indicated in the two columns labeled "total cost" in Exhibit A, show that for the twenty-two lines, private companies--on average--could operate for 50% of the public operator cost.

Such comparably lower costs can be attributed to five advantages that private operators have over public operators:

- Lower salaries are paid to drivers, private carrier.
- Overhead expenses are less than public properties.
- Part-time drivers can be used more.
- Worker-drivers, who work near the bus's destination, eliminate deadheading.
- Flexible work rules allow efficient use of personnel.
- Terminal locations can be strategically placed if the operator's service is in one geographical location.

Revenue and Net Profit or Subsidy

Revenue estimates for these same twenty-two express/commuter routes were also made. Present fares and ridership were used as a base and then break even fares were calculated, taking into consideration the effects of price elasticity.

The results as shown in Exhibit A indicate that if private companies, under contract, took over operation of these twenty-two public lines with no changes in fare structure, the needed public subsidy would be reduced by \$5,325,251, or 97% from \$5.50 million to \$0.179 million. Average subsidy per trip would decrease \$2.21 or 92.4 percent from \$2.39/trip to \$0.18/trip.

Additionally an examination was made of the conditions necessary to operate entirely at a profit. The results indicate that four routes could be so operated by private carriers with no fare increase; four routes would operate profitably with less than a 30% fare increase, three with an increase between 30% and 70% and four for which private, non-subsidized operation does not appear feasible.

These results represent the short term impacts of converting a relatively small number of bus lines to private operations. The high public labor costs which influenced this analysis might also be incurred by private operators in the long term if large scale conversion were implemented.

EXHIBIT A
ECONOMIC COMPARISON OF PRIVATE &
PUBLIC COMMUTER/EXPRESS BUS OPERATIONS

BUS LINE	ANNUAL REVENUE	PUBLIC OPERATIONS				PRIVATE OPERATIONS			
		ANNUAL COST	PROFIT (SUBSIDY)	FAREBOX RECOVERY	SUBSIDY PER TRIP	ANNUAL COST	PROFIT (SUBSIDY)	FAREBOX RECOVERY	SUBSIDY PER TRIP
RTD 501	55,200	92,660	(37,460)	.60	NA	40,695	14,505	1.36	NA
RTD 503	62,400	87,393	(24,993)	.71	NA	50,513	11,887	1.27	NA
RTD 504	69,600	128,405	(58,805)	.54	NA	57,343	12,257	1.21	NA
RTD 505	190,800	256,125	(65,325)	.74	NA	117,816	72,984	1.62	NA
RTD 507	48,000	76,648	(28,648)	.63	NA	26,324	21,676	1.82	NA
RTD 508	55,200	93,907	(38,707)	.59	NA	43,114	12,086	1.28	NA
RTD 509	124,800	190,294	(65,494)	.66	NA	88,505	36,295	1.41	NA
RTD 511	62,400	78,592	(16,192)	.79	NA	42,118	20,282	1.48	NA
RTD 716	188,940	635,204	(446,264)	.30	5.22	256,784	(67,844)	.74	0.79
RTD 721	448,704	1,053,195	(604,491)	.43	2.60	491,564	(42,860)	.91	0.18
RTD 737	206,424	361,315	(154,891)	.57	1.66	164,914	41,510	1.25	-
RTD 755	496,320	1,117,312	(620,992)	.44	2.59	580,088	(83,768)	.86	0.35
RTD 757	808,436	1,415,243	(611,807)	.57	1.47	648,501	154,935	1.24	-
RTD 758	270,108	735,441	(465,333)	.37	3.32	298,872	(28,764)	.90	0.21
RTD 760	769,860	1,280,799	(510,939)	.60	1.47	582,251	187,609	1.32	-
RTD 762	523,488	1,192,475	(668,987)	.44	2.47	701,989	(178,501)	.75	0.66
RTD 764	500,733	826,812	(326,079)	.61	1.54	455,970	44,763	1.10	-
OCID 201	26,103	201,431	(175,328)	.13	8.93	100,187	(74,084)	.26	3.77
OCID 203	47,121	328,959	(281,838)	.14	7.95	249,256	(202,135)	.19	5.70
OCID 204	26,442	94,055	(67,613)	.28	3.40	38,894	(12,452)	.68	0.63
OCID 209	52,884	134,358	(81,474)	.39	2.05	99,175	(46,291)	.53	1.16
OCID 291	13,560	166,686	(153,126)	.08	15.01	87,185	(73,625)	.16	7.22
Subscription	668,400	1,004,024	(335,624)	.67	NA	466,428	201,972	1.43	NA
RTD Park-n-Ride	4,208,013	8,617,796	(4,409,783)	.49	2.16	4,180,933	27,080	1.006	-
OCID Park-n-Ride	166,110	925,489	(759,379)	.18	6.08	574,697	(408,587)	.29	3.27
TOTAL	5,042,523	10,547,309	(5,504,786)	.48	2.39	5,222,058	(179,535)	.97	0.18

COMPARATIVE OPERATIONS OF A TYPICAL COMMUTER/EXPRESS BUS LINE

The characteristics of the typical commuter/express bus line are based on the average of SCRTD's Park-and-Ride routes. The average route is 31 miles and lasts 71.5 minutes. In its 12 daily trips it travels 189,720 revenue miles in 7,297 hours for an average speed of 26 mph. The economic and ridership characteristics, depending on whether it is publicly or privately operated, are contrasted below.

COMPARATIVE OPERATIONS OF A TYPICAL COMMUTER/EXPRESS BUS LINE

	<u>Public Operated</u>	<u>Private Operated</u>
<u>Ridership</u>		
Daily	864	858
Per Bus	36	36
<u>Economic</u>		
Annual Cost	\$931,537	\$452,250
Annual Revenue	454,863	479,710
Profit (Subsidy)	(476,673)	27,460
Subsidy Per Trip	2.16	-0-
Farebox Recovery Ratio	0.49	1.06
Annual Subsidy per person	\$1,103	\$0.

THE INSTITUTIONAL AND REGULATORY FACTORS AFFECTING COMMUTER/EXPRESS BUS TRANSPORTATION

Institutions

Bus transportation in the SCAG region is regulated by four institutions:

- California Public Utilities Commission regulations and practices (affecting all private operators)
- State and public transit legislation (affecting SCRTD and OCTD)
- Federal regulations and legislation (affecting all federally funded operators)
- Collective bargaining agreements (affecting all unionized operators)

The California Public Utilities Commission

The CPUC regulates certification, fares and safety of private transit operators. In order for a private company to be certified to operate a route, it must not be about to engage in "unfair competition." Unfair competition is basically duplication of an existing well-run bus service. If a private operator is trying to run buses on the same route already serviced, he must prove that his schedule, fares, pick-up and drop-off points or clientele are sufficiently different so as not to be competing with the first operator.

If public agencies contract private operators, those operators must get certification from the CPUC. If the driver of a vanpool (seating capacity 15 or less) is on his way to work, no certification is needed. Firms operating buses for their employees are exempt also. Expedited and temporary certification is now offered.

Applicants seeking certificates must serve notice to a variety of interested parties. Anyone can protest a certification and the CPUC will hold a hearing on good cause. Public districts have often made protests to keep private operators from competing against their established routes. On the other hand, public operators have refrained from protesting if private companies sign waivers giving up their rights to protest future competition from them. (Once established private operators are protected from competition from public operators.)

State Public Transit Legislation

California legislation creating SCRTD and OCTD regulates them on the issue of competition with previously established transit operators. SCRTD is obliged to gain the consent of any operator who would lose passengers due to its actions. OCTD must buy out such companies.

Federal Regulations and Legislation

Federal regulations prohibit UMTA-funded public transit authorities from competing with or purchasing private transit companies unless the role of the private operator is at the maximum amount feasible or fair compensation is made.

Federally funded public operators are also prohibited from any actions tending to harm their employees or the employees of an acquired transit operation.

Collective Bargaining Agreements

Collective bargaining agreements have made sub-contracting much harder for both SCRTD and OCTD. Since SCRTD's buses can only be operated by its own employees, any sub-contractor must have his own buses. Also, any sub-contracting done cannot reduce the number of new SCRTD employees hired. OCTD cannot sub-contract community fixed-route services such as their Easy Rider routes.

EVALUATION OF ALTERNATIVE PUBLIC AND PRIVATE OPERATING SCENARIOS

Five scenarios and their implications are summarized in Exhibit B.

EXHIBIT B
EVALUATION OF ALTERNATIVE
PUBLIC/PRIVATE SCENARIOS

SCENARIO	SYSTEM IMPACTS	
1. Expansion of Public Commuter Bus Ser- vices	Economic Service Level Ridership Net Impact	Subsidy increases of \$2.16 per trip Possible cutbacks in other services to avoid net increase in subsidies. Increase in express ridership, possible decrease in other services due to cutbacks. Increase in express service will add strain to budget. Cutting back other services to avoid net subsidy increase may result in a net decrease in total system ridership.
2. Expansion of Private Commuter Service Without Public Funds. Public Service Re- mains Constant.	Economic Service Level Ridership Net Impact	No impact on public budgets. Private fares might be higher than public fares. Increased express service and geographic coverage, no impact on existing service. Increase in express trips; increase in local trips in CND as new transit users make additional trips. Increase in total transit use with no subsidy increase. Possible increase in public revenues due to increase in local trips.
3. Expansion of Private Commuter Services With Public Funds. Public Service Re- mains Constant. a. Only Marketing Pro- motional Activities Publicly Funded b. Operations Con- tracts Publicly Subsidized.	Economic Service Level Ridership Net Impact -- --	Public assistance will keep fares down. Cost is less than for public expansion. Reduced necessity of cutbacks to balance budgets. Higher than in Scenario 2. Higher ridership than Scenario 2 at a cost much less than Scenario 1. Success of private service is enhanced and fares reduced at minimal public expense. Cutbacks in other services are min- imized. Ridership probably greater than Scenario 2, but less than Scenario 1. With a subsidy per trip much less than for Scenario 1, the same number of express trips can be served. This reduces the amount of service reduction that may be required.
4. Replacement of Public operations by Private Com- panies-Without Public Funds Existing Level of Service is Main- tained.	Economic Service level Ridership Net Impact	Reduction in subsidy of \$2.16 per trip, express fares may increase somewhat. Higher sensitivity to ridership for private express service. Less productive routes may be cut back. Express subsidies could be re- allocated to expanding local service in densely populated areas. Local service expansion could add more local trips than the number of lost express trips. Net increase in transit ridership with a significant decrease in subsidy.

EXHIBIT B (CONTINUED)
EVALUATION OF ALTERNATIVE
PUBLIC/PRIVATE SCENARIOS

SCENARIO		SYSTEMS IMPACTS
5. Replacement of Private Operations by Private Companies - With Public Funds Existing Level of Service is Maintained	Economic Service Level Ridership Net Impact	Public subsidy could guarantee no increase in fares. Cutbacks in express service might not be required. Subsidy saved could be reallocated to expanding local bus service. Conversion could be accomplished with little or no loss in express ridership. Transition to private operations could be smooth with little or no loss in express ridership and perhaps no change in the level of service.
a. Only Marketing Promotional Activities Publicly Funded b. Operations Contracts Publicly Subsidized	-- --	The efforts of public agencies would greatly improve the possibility of a smooth transition from public to private operations. Some express service cutbacks and, perhaps fare increases might still result. Subsidizing private operations could ensure that service levels and fares do not change, thus ensuring no loss in ridership. Both cost and ridership are greater than Scenarios 4 and 5a.

CONCLUSIONS AND POLICY RECOMMENDATIONS

This report has documented the economic advantages if private bus operators assume a larger role in providing commuter/express service. Rapid implementation of the following recommendations, approved by the Commuter/Express Bus Task Force, would increase transit services while reducing operating subsidies.

- All transit districts and municipal operators in the region should review their commuter/express bus operations and determine the potential cost savings to be achieved by conversion to private operations.
- All transit, district municipal operators and planning agencies in the region should take immediate steps to remove any institutional barriers to converting to private operations, including pressing for new state or federal legislation, if required.
- All transit districts and municipal operators in the region should cooperate to the fullest extent possible with private operators to make private service a part of the regional transit service. This could include (a) dissemination of schedules and other operating data and (b) transfer discounts.
- All transit districts and municipal operators should promote the expansion of private commuter/express bus operations by (a) not contesting PUC certificate applications unless the proposed service would have a serious negative impact on the public system, (b) not expanding public commuter/express services in areas where private operations appear feasible, and (c) assisting private operators in identifying new commuter/express bus markets.
- Expansion of privately operated services will need promotional, informational and coordinative support which might well be provided by Commuter Computer.

1.0 INTRODUCTION

This report is the product of a ten month study which has focused on the respective roles of the public and private sectors in providing commuter/express bus services. The study has examined two critical, interrelated issues affecting public policy decisions in this area. The issues are: (a) the comparative economics of public and private operators; and (b) the institutional/regulatory framework within which services are currently provided and which constrain policy changes.

This report summarizes the work of the past ten months and presents some policy recommendations for future actions to be taken in providing commuter/express bus service in the SCAG region.

1.1 REASONS FOR PURSUING THE STUDY

There are a number of events which have occurred from the local to the federal level which effectively create the arena in which this analysis was made. The net result of these events is the public transit operators are facing severe budget constraints that are hampering expansion efforts and may soon necessitate some service cutbacks. At the same time the population growth in the region, much of which is in outlying areas where housing is less expensive, is creating a demand for more transit, both local and express.

Some of the events which have occurred recently that impact this analysis are:

- The President's budget cuts include the elimination of transit operating subsidies. These subsidies constitute 19.0 percent of the combined FY 82 operating budget for public operators in the SCAG region.
- The administration's decision not to fund construction of new rail starts has pushed the prospect of rapid rail for Southern California farther into the horizon. Dependence on the bus to provide transit service will probably continue for at least the next several years.
- Planning studies are currently underway that explore the possibilities for major expansions in express transit service throughout the region.
- Due to budget constraints, SCRTD is unable to expand local bus service in the most densely populated areas of Los Angeles County. Service in these areas is severely overcrowded.
- SCRTD recently imposed a massive fare increase, especially in commuter/express bus service, in order to meet its current budget demands.

1.2 THE COMMUTER/EXPRESS BUS TASK FORCE

From the outset the study was designed to address the concerns of public and private operators as well as the regional planning community. To achieve this end, a special task force was formed to bring together the numerous and varied interests to give technical direction and policy feedback to the study.

Membership on the task force included public transit operators and private commuter bus operators plus planning, funding and regulatory agencies. Participation by the entire membership was extremely spirited and productive despite often conflicting goals. Input by the task force has proved invaluable in obtaining and interpreting the material used in this report and in improving the overall quality of the entire study.

2.0 COMMUTER/EXPRESS BUS SERVICE AND RIDERSHIP - THE CURRENT SITUATION

This chapter describes the current state of the commuter express bus service and ridership in the SCAG region. The economics of commuter/express bus service is covered in Chapter 3 and the institutional and regulatory context is examined in Chapter 4.

A macro-approach has been used to present a general survey. Service and ridership information has been compiled on a corridor basis, generally along freeway corridors. Less emphasis has been placed on origin-destination route information, as this is available from the individual operators, both public and private.

2.1 PUBLIC TRANSIT OPERATORS

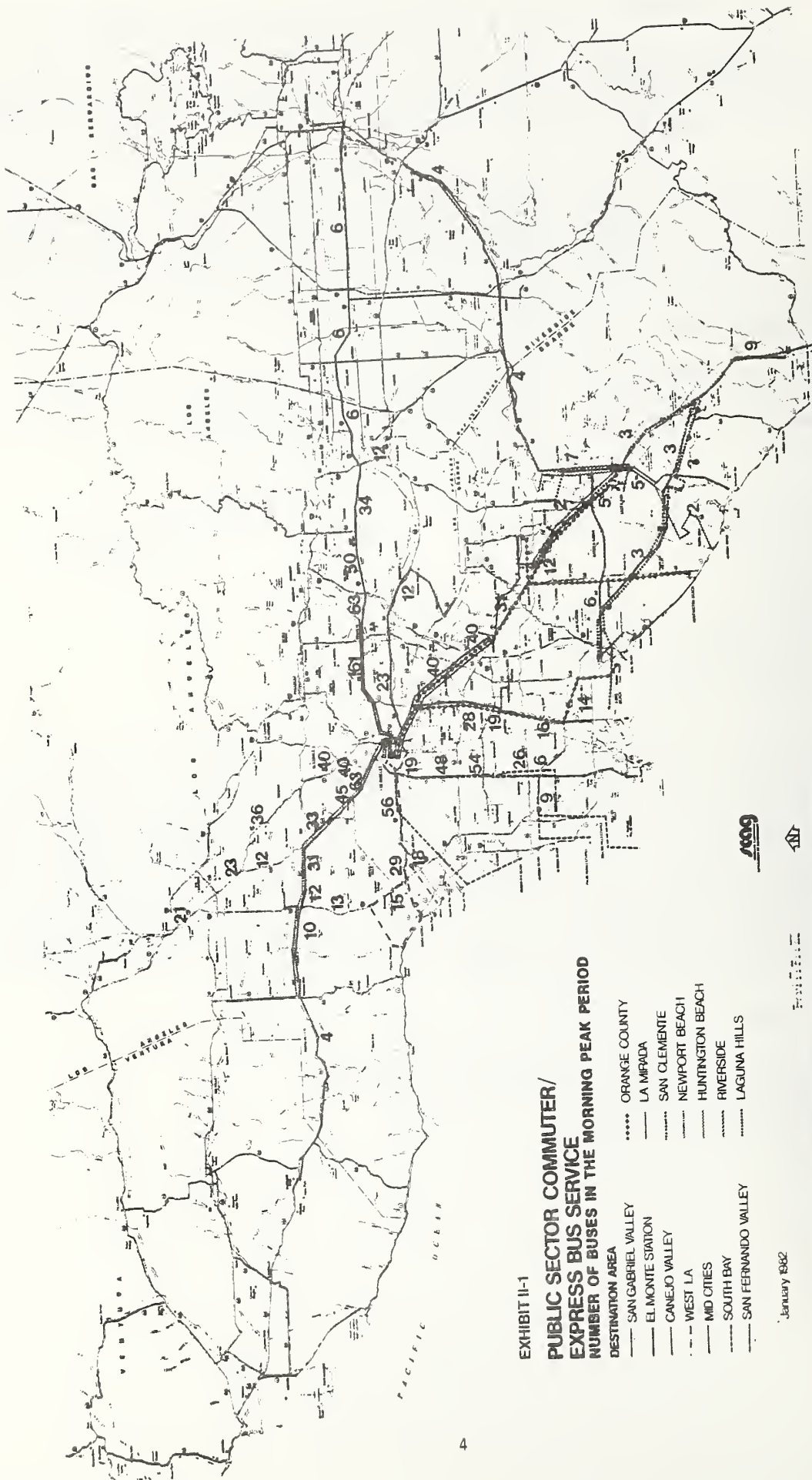
Eleven subscription bus routes and about 68 express lines operated by six public transit agencies provide the bulk of the public express/commuter bus service in the region. The six operating agencies are:

<u>Public Transit Agency</u>	<u>Routes</u>	
	<u>Express</u>	<u>Subscription</u>
SCRTD	56	11
OCTD	7	
Long Beach Transit	1	
Santa Monica Bus Lines	1	
Torrance Transit	2	
Gardena Transit	1	

On a corridor basis, the highest service level can be found along the El Monte Busway on the San Bernardino Freeway. Exhibit III-1 shows the greater Los Angeles area, with the freeways where express services exist. The service attribute used has been the number of vehicles (buses) used during the morning peak hours. About 161 buses are used on the San Bernardino Freeway. The Hollywood Freeway, with 63 buses and the Santa Anna Freeway, with 62 buses, follow. The Santa Monica and Harbor Freeways have 56 and 54 buses respectively in the morning peak hours. Appendix 1 breaks down these freeway corridors into segments and lists the service levels for a three-hour peak period.

Commuter express service can be classified as follows:

- express service with multiple local stops
- express service with few local stops
- park and ride service
- subscription service



Additionally, express service may be offered only during the peak periods for certain lines, or for the whole day for other lines. The type of service offered is tailored to the particular corridor. For example, along the Hollywood Freeway, express service has multiple local stops, and the portion of the route actually on the freeway is relatively short. On the other hand, subscription lines have few pick-up and drop-off points and the travel along the freeway itself is a major portion of the route.

Ridership levels reflect the geographical distribution of express service. About 71,000 boardings are made on public express and subscription lines every day. As expected, ridership along the San Bernardino Freeway is highest with 20,000 daily boardings. Exhibit II-2 shows the ridership levels along the freeways. The corridors with substantial ridership, in addition to the San Bernardino Freeway, are:

<u>Corridor</u>	<u>Daily Boardings</u>
Pasadena Freeway	2,800
Hollywood Freeway	12,000
Harbor Freeway	5,900
Santa Ana Freeway	5,800
Long Beach Freeway	3,500
Golden State Freeway	1,700
Santa Monica Freeway	4,400
San Diego Freeway	1,800
Pomona Freeway	3,500

2.2 PRIVATE COMMUTER OPERATIONS

Commuter bus companies operate in all of the SCAG region counties except Imperial County. While the majority provide services within urbanized areas, a growing number serve outlying locations such as Edwards Air Force Base, San Onofre and the Barstow area.

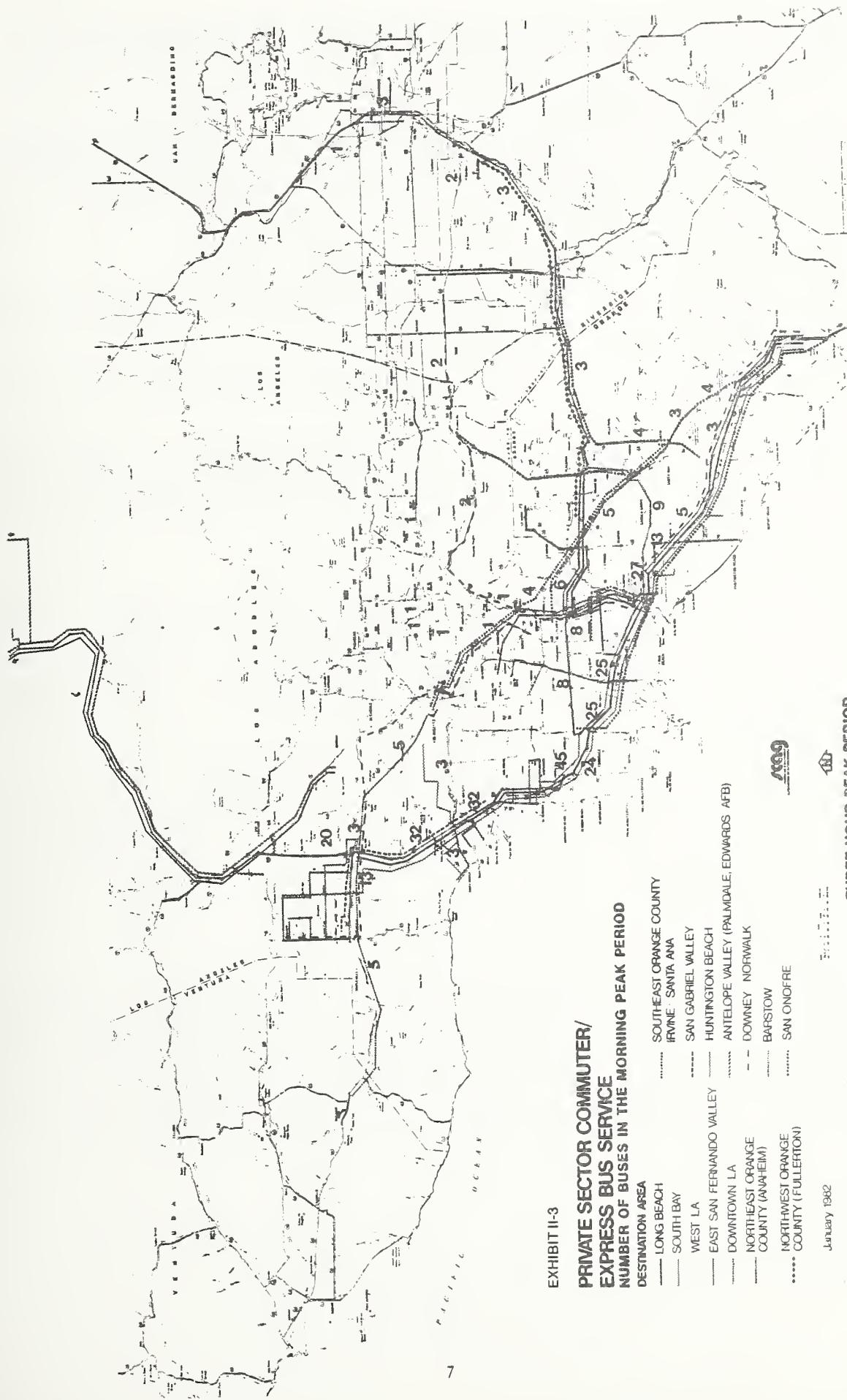
As shown in Exhibit II-3, the greatest concentration of commuter bus service is along the San Diego Freeway (Interstate 405) corridor. This corridor starts from the San Fernando Valley all the way south to El Toro and Laguna Hills. Up to 45 buses run along this corridor during a three-hour peak period. The El Segundo/Hawthorne area is the principal destination.

A second corridor where private commuter service is "relatively heavy" is along the Artesia Freeway, from I-405 to I-605. An average of eight buses serve this corridor. Appendix A shows a more detailed listing of private commuter bus service on the various freeway segments.

Outside the urbanized area, the corridor between Lancaster and Edwards Air Force Base in North Los Angeles County is served by 10 routes. A complete listing of the commuter bus routes in the SCAG region can be found in Appendix A, INVENTORY OF COMMUTER BUS SERVICES. The typical private commuter bus route has one to three pick-up points, one or two drop-off points and at least a 30-mile freeway travel portion.

Ridership on the private commuter buses averages about 35 riders per route. With about 140 routes in the SCAG region, about 5,000 persons*

*Boardings are double this number, to 10,000 daily boardings.



board commuter buses every day. About 15 private carriers operate these routes, with Commuter Bus Lines the largest with about 67 buses.

2.3 AN ASSESSMENT

From a comparison of Exhibits 1 and 3, several observations can be made about public and private commuter/express bus operations. These are:

- High service levels are provided by both public and private operators;
- There exist "market niche" routes for private operators along a corridor not served well by public agencies; An example is the Ventura to El Segundo route
- Good geographical coverage is provided by both public and private operators;

With 140 private commuter bus routes and 80 public express lines, Southern California's urbanized region is well-served. Clearly the public operators dominate the downtown oriented freeway corridors bound for the Los Angeles central business district (CBD). Private operators dominate the non-downtown subscription market.

Another difference between the services provided by public and private operators is the length of the trip actually on the freeway. As shown below, public express buses tend to travel less than 20 miles on the freeway. In contrast, private commuter buses tend to travel more than 20 miles. In a sample of 80 private routes operated by the five major operators, 60% of the routes had buses travelling on the freeway 30 miles or longer.

Actual Distance Travelled on the Freeway

<u>Miles</u>	<u>Private Routes*</u>	<u>Public Routes</u>
0-9	1	30
10-19	13	36
20-29	18	10
30 or more	48	3

Along two non-downtown oriented corridors - the San Diego and Riverside Freeways, the private carriers have captured a niche. These two corridors are not well-served by transit agencies, while at the same time, demand exists with employment centers along the corridor. The routes tend to be even longer than the typical public express route; this may arise from private operators being not subject to the same jurisdictional funding problems that have delayed large scale public inter-county service.

*Sample of 80 routes provided by five major operators.

The services provided by the public and private express/commuter bus companies combine to provide an extensive geographical coverage. While inter-county travel between Orange and Los Angeles counties dominate, San Bernardino, Riverside and Ventura counties are also relatively well-served. As was pointed out previously, the private commuter bus routes supplement the public express lines, providing more direct and pin-pointed service. The result is a network of express and commuter routes providing a good level of service to about 81,000 Southern California riders every day.

3.0 THE ECONOMICS OF COMMUTER/EXPRESS BUS SERVICE

Economics is a major consideration in the analysis of commuter express bus service and the tradeoff between public and private operations. Public operators are forced to carry heavy subsidies by rapidly increasing labor costs and public pressure to keep fares as low as possible. Private operators, on the other hand, have the advantage of a much lower labor cost coupled with some flexibility in the fares that they charge. As a result, there is a disparity in the cost to the community between public and private operators which could be exploited to provide the maximum service at the minimum cost.

This section examines the costs and revenues associated with both public and private operations and compares them on a route-by-route basis. Operating cost models are developed for each type of service and the estimated costs are compared. Revenues are estimated for both services with an adjustment to compensate for the fare elasticity of demand. A total of 22 existing SCRTD and OCTD bus lines are examined from peak only park-and-ride and subscription service categories.

3.1 OPERATING COSTS

Careful attention was given to the estimation of operating costs for public and private operators to ensure a realistic basis of comparison. Allocating the exact cost to a particular bus line is difficult, especially for public operators. Therefore, some generalizations were made based on systemwide characteristics. These generalizations notwithstanding, the cost estimates provided by these models are realistic and represent the most accurate estimates available.

3.1.1 Public Transit Operations

Since the majority of public express service in the region today is provided by SCRTD and OCTD, this analysis concentrated on these two districts. The municipal operators experience some economics over the districts by taking advantage of their smaller size and less costly labor agreements. However, because of the small number of commuter/express buses currently run by these operators, no detailed analysis of their costs was performed. The analysis was further restricted to a select number of express bus lines which operated exclusively during peak periods. Various cost allocation models were examined and compared in order to find the most consistent basis on which to estimate operating costs. As shown below, a high degree of consistency was obtainable through a selective choice of models.

Orange County Transit District

OCTD has been using a cost allocation model for the past few years that allocates unit costs to vehicle hours, vehicle miles, and revenue vehicles. This model was broken down into peak and off peak periods for fiscal year 1981 under the assumption the peak period service is more costly than off peak service. The FY 1981 model for peak period service is:

$$OC = 18.53 (VH) + 0.84 (VM) + 23,355 (PV)$$

where:

OC = Fully allocated annual operating cost

VH = Total vehicle hours (revenue plus non-revenue)

VM = Total vehicle miles (revenue plus non-revenue)

PV = Number of scheduled vehicles during each peak period (the model actually distinguishes between AM and PM peak period vehicles. To simplify the model, the two variables were merged into a single peak vehicle variable with no loss of accuracy.)

OCTD provided operating data for five express bus routes operated during Fiscal Year 1979. Application of the model for these five routes resulted in the following annual costs estimates in 1981 dollars:¹

Route 201	\$181,767
Route 203	\$251,908
Route 204	\$ 84,861
Route 209	\$181,847
Route 291	\$ 75,201

Southern California Rapid Transit District

Research disclosed three entirely different cost allocation models for SCRTD. While they came from different sources and represented different fiscal years, all three models were derived from SCRTD annual budgets. Below is a short description of each model followed by some comparative analyses.

SCRTD Planning Department Two-Variable Model

The Planning Department at SCRTD prepared a cost formula for estimating the cost of bus service for Fiscal Year 1982. The basic formulation of the model is:

$$OC = 21.164 (VH) + 1.632 (VM)$$

where:

OC = Fully allocated annual operating cost

VH = Total vehicle hours (revenue plus non-revenue)

VM = Total vehicle miles (revenue plus non-revenue)

Four Variable Model

A recent study of SCRTD's operating costs by UCLA used a four-variable model based upon in-service miles, in-service hours, pullouts, and peak period vehicles. Pullouts are defined as the number of AM

¹ These estimates were calculated based on FY 79 operating data and are not the same as the estimates calculated later which are based on current schedules.

plus PM peak period vehicles minus the number of base day vehicles. Since the bus lines being analyzed are peak only lines, pullouts are equivalent to the sum of AM and PM peak vehicles. The pullouts variable, then, is another measure of peak period vehicles in this application. This effectively reduces the number of variables in the model from four to three. The FY 1978 model is as follows:

$$OC = 16.44 (ISVH) = 0.41 (ISVM) + 4480 (PO) + 27,481 (PV)$$

where: ,

OC = Fully allocated annual operating cost

ISVH = In-service (revenue) vehicle hours

ISVM = In-service (revenue) vehicle miles

PO = Number of pullouts per day

PV = Number of scheduled vehicles during each peak period

Cherwony Three Variable Model

LACTC has been doing some work in costing transit services based on this three variable model which is very similar to the OCTC model. The formulation of the model for FY 1979 is as follows:

$$OC = 17.98 (VH) + 0.7869 (VM) + 17,574 (PV)$$

where:

OC = Fully allocated annual operating cost

VH = Total vehicle hours (revenue plus non-revenue)

VM = Total vehicle miles (revenue plus non-revenue)

PV = Peak Period vehicles

Comparison of Cost Models

The three cost allocation models for SCRTD were compared for a series of express bus lines which operated in 1980. Since the models were prepared for different years, an adjustment was made so that the models represented FY 1981 costs. The adjustments were based upon SCRTD's total operating cost per vehicle hour as shown below:

<u>Fiscal Year</u>	<u>Operating Cost Vehicle Hour</u>	<u>Adjustment to FY 1981</u>
1978	32.81	1.500
1979	35.70	1.378
1980	42.75	1.151
1981	49.20	1.000
1982	55.42	0.888

Using the above adjustment factors, FY 1981 operating costs for the 700 series of RTD express buses were calculated (excluding 770 which has base day service). The annual costs for FY 1981 are shown below, using all three models, as well as the OCTD model:

RTD Line	1981 Annual Costs			OCTD
	SCRTD 2-Variable	SCRTD 4-Variable	Cherwony 3-Variable	
716	258,560	431,382	404,638	336,948
721	645,341	905,897	896,990	718,978
737	235,127	318,543	317,304	261,410
755	761,004	924,449	978,905	788,317
757	1,092,529	1,069,255	1,333,209	1,077,782
758	566,566	493,999	673,539	542,859
760	1,043,073	1,057,576	1,277,216	1,026,201
762	873,033	900,903	1,048,867	848,958
764	774,216	814,152	927,243	739,905
TOTAL	<u>6,249,449</u>	<u>6,916,156</u>	<u>7,857,911</u>	<u>6,341,358</u>

At first glance it appears that the SCRTD Two-Variable Model most closely approximates the estimates by the OCTD model since in the aggregate it differs by less than two percent. On a line-by-line basis, however, the relative costs fluctuate with the SCRTD Two-Variable Model ranging from five percent above to 23 percent below the OCTD model estimate.

The SCRTD Four-Variable Model generally produces a cost above that of the OCTD Model. The percentage by which it exceeds the OCTD model estimate ranges from three to 28 percent. For one line the estimates is ten percent below the OCTD Model estimate.

The Cherwony Three-Variable Model is consistently about 24 percent above the OCTD Model as shown below:

SCRTD	Cherwony Three-Variable Model Percent Above OCTD Model
716	1.20
721	1.25
737	1.21
755	1.24
757	1.24
758	1.24
760	1.24
762	1.24
764	1.25

This relationship is very close to the relationship between unit costs for the two districts as shown in their Short Range Transit Plans. SCRTD projects that in FY 1981 the operating cost per vehicle service (revenue) hour is \$49.20 while OCTD projects a similar unit cost of \$39.45. This indicates that SCRTD experiences unit costs about 25 percent higher than OCTD.

Selection of Cost Models

The 25 percent difference in unit operating costs between OCTD and SCRTD was considered of sufficient importance to be reflected in the analysis. Therefore, separate models were used to estimate costs for each district.

Since OCTD's model took into account the difference between peak and off peak period costs and had the capacity to estimate the cost of peak period service, it was selected for the OCTD lines.

The Cherwony Three-Variable Model very consistently maintained the 25 percent difference in unit costs for the SCRTD lines. It was used to estimate the cost of all SCRTD lines evaluated in the study. Building in the inflation factor, the model looks as follows:

$$OC = 24.78 (VH) + 1.084 (VM) + 24,217 (PV)$$

These two models are not the only models that could produce useful estimates of operating costs on a line-by-line basis. The fact that so many models exist implies that no universally accepted model has been established. These models do have a high degree of consistency as has been shown and provide reasonable estimates of costs for this study.

Conversion to Fiscal year 1981-82

The economic analysis was performed based on fiscal year 1981-82 costs and revenues. Therefore, the models selected above were converted to FY 1981-82 costs using an escalation of 10.9% for OCTD and 12.6% for SCRTD. These escalation factors were derived from the districts' respective Short Range Transportation Plans.

The FY 1981-82 operating cost models are as follows:

- OCTD; $OC = 20.55 (VH) + 0.95 (VM) + 25,901 (PV)$
- SCRTD; $OC = 27.90 (VH) + 1.22 (VM) + 27,268 (PV)$

3.1.2 Private Transit Operations

Private bus operators have some distinct advantages over public operators which allow them to experience much lower costs for the same or similar services. Many of these advantages stem from the fact that most private operators are not subject to the salary levels and operating restrictions that have a recently characterized labor agreements in the public sector. Some of the advantages open to the private bus operator are:

- LOWER SALARIES are paid to drivers which provide an immediate cost saving impact;
- PART-TIME DRIVERS can be used more extensively which saves the cost of paying drivers even when they are not working;
- WORKER-DRIVERS can be employed which eliminates the need for dead-heading, one of the major cost factors of transit service; and
- WORK RULES are more flexible which makes personnel assignments more efficient; and

- TERMINAL LOCATIONS can be strategically placed if an operator's service is in one particular geographic area, thus minimizing the number of deadhead miles travelled.

Survey of Operators

Twenty-six questionnaires were sent out to private operators in the region asking for cost estimates for nine existing SCRTD and OCTD express bus lines. Since the purpose of the questionnaire was simply to determine the total cost, no breakdown or itemization was requested.

The comments of the various respondents to the questionnaire made it apparent that a generalization of private operating costs is very difficult. Issues such as the value of the vehicles, worker or "professional" drivers, and terminal locations can create situations where the cost per mile of two bus lines may be vastly different while the level of service as perceived by the riders may be identical. The following descriptions indicate the wide range of operating characteristics that determine a corresponding wide range in cost. These examples represent extreme situations. Most private services fall somewhere between these extremes.

- MAXIMUM COST service could be provided using a new intercity bus with all the extras costing well over \$150,000. These buses are returned to the storage facility after the run which requires dead heading miles equal to or greater than revenue miles. Drivers are paid for each run from the time the bus leaves the storage facility until it is returned to that facility.
- MINIMUM COST service could be provided with used buses still functional and comfortable, worth between \$12,000 and \$25,000. Worker drivers pick up the buses from a storage location very near the origin point of the line and leave them at the destination point during the day. There are virtually no deadhead miles, or non-revenue hours for which the driver must be paid.

Except for the vehicle being used, the characteristics described above may be totally unknown to the rider. The cost of operating private express bus service, then, is not directly correlated with the level of service.

In some cases, worker drivers may be undesirable or difficult to find. Use of older equipment may be a cost saver for these cases. Finding worker drivers for a new service along a corridor not previously served by express bus may be particularly difficult. Most worker drivers have well established patterns of commuting during specific hours in the morning and evening. Often they are transit users who have been riding on the particular bus which they later drive. With this type of contact unavailable, new services may not always have the option of worker drivers. This might mean that the cost of providing a new service may be somewhat higher than for certain, already established, services.

Private Operator Costs

While only a small number of operators responded to the questionnaire, the majority of their cost estimates were quite similar; averaging \$2.79

per revenue mile. The average of the questionnaire responses was used for each of the bus lines listed in the questionnaire. Bus lines not in the questionnaire but included in this report were assigned the cost of \$2.79 per revenue mile.

One very large operator indicated that he has contracts for commuter services that are significantly below the \$2.79 value, and others that are significantly above. This illustrates the variance that exists in the cost of private operations. It also indicates the problem in generalizing private costs for comparison with public costs. Every commuter/express bus service has its own unique operating characteristics which must be considered when the service is evaluated. While general comparisons are made in this report, a more detailed study should be done on a line by line basis before any conversion from public to private operations is implemented.

CALTRANS is currently involved in a program of providing guarantees to some intercity bus operators who provide low revenue service in specific corridors as specified in the State Intercity Bus Plan. Under that program, Caltrans guarantees to the operator the "wheel cost", or minimum operating cost exclusive of profit or certain overhead items. Contracts under the program range between \$.91 and \$1.51 per revenue mile. The range is significantly below the \$2.79 average obtained through the questionnaire. This is not contradictory, however, because the state contracts are for services which are generally spread out several hours during the day thus allowing the vehicles to be used more efficiently. The commuter services under study here generally require total dedication of each vehicle to a specific run. This tends to increase the cost.

3.1.3 Cost Comparison

Using the cost models described above, the cost of operating 22 existing SCRTD and OCTD bus lines were calculated for both public and private operators. These calculations were performed under the following assumptions:

- The bus lines are operated for a full year exactly as they are currently scheduled to operate.
- The average cost for each bus line that the private operators estimated their costs, from the questionnaire was used. In all other cases, the factor of \$2.79 per revenue bus mile was used.
- The cost models were used to calculate public costs based on current schedules on all cases rather than the costs calculated from FY 79 statistics as used above. In some instances bus frequencies have changed since FY 79 and the resulting cost calculations are significantly different from the estimates made earlier in this report.
- All costs are for FY 1981-82.
- All buses run 255 week days per year with no weekend or holiday service.

- Bus lines 760, 762 and 764 were assumed to operate as they did in early 1980. This makes the service levels consistent with the most recent ridership data for these lines.

Exhibit III-1 shows the results of the cost calculations. A detailed listing of the operating statistics used in the calculations is given in Appendix B.

In general, the cost of providing the commuter/express services shown in Exhibit III-1 is 50 percent as expensive for private operators as it is for public operators. This ratio ranges from a low of .34 to a high of .76. Breaking the total cost differential into various service categories gives the following potential cost savings:

- RTD Subscription Service (501-511), \$537,596
- RTD Park and Ride (716-764), \$4,436,863
- OCTD Park and Ride (201-291), \$350,792
- Total Cost Differential, \$5,325,251

The results of this cost comparison are quite significant. A savings of 50 percent in the total operating cost of commuter/express bus service could be achieved by using private, rather than public, carriers. As an indication of the magnitude of these savings, converting the SCRTD subscription and park-n-ride buses to private operations would save the district nearly \$5 million a year. This is about nine percent of their planned UMTA Section 5 operating subsidy for FY 1982, about one percent of the total operating budget for SCRTD.

Many of the cost estimates that were provided by the private operators were based on a total cost per mile. While this provides a simple formula for estimating costs, it also introduces some bias into the process. The costs of the very short bus lines, such as some of the SCRTD subscription lines, are probably underestimated due to this simplistic formula. On the other end of the scale, costs for some of the very long distance lines may be overestimated.

Since the cost per mile was used for many of the estimates provided by the private operators, it represented the "least common denominator" for finding the average unit cost. For the majority of bus lines in this study, the cost per mile factor is appropriate, and the estimated costs are reasonable. The conclusions drawn from the aggregate data are not significantly different from those that would have been drawn based on a more sophisticated private cost model.

Most of the respondents included a profit margin in their estimates. As a result, the survey yielded cost estimates for private operations which are probably biased a little on the high side. Even though profit was included by most respondents, it was assumed that the costs represented actual costs and that revenues would have to exceed these costs to obtain a profit. Therefore, the cost savings estimated throughout this report for using private, rather than public, carriers are conservative.

EXHIBIT III-1

COMPARISON OF PUBLIC AND PRIVATE OPERATING COSTS

<u>BUS LINE</u>	<u>TYPE OF SERVICE</u>	<u>PRIVATE COST</u>	<u>PUBLIC COST</u>	<u>DIFFERENCE</u>	<u>RATIO PRIVATE/ PUBLIC</u>
RTD 501	Subscription	40,695	92,660	51,965	.44
RTD 503	Subscription	50,513	87,393	36,880	.58
RTD 504	Subscription	57,343	128,405	71,062	.45
RTD 505	Subscription	117,816	256,125	138,309	.46
RTD 507	Subscription	26,324	76,648	50,324	.34
RTD 508	Subscription	43,114	93,907	50,793	.46
RTD 509	Subscription	88,505	190,294	101,789	.47
RTD 511	Subscription	42,118	78,592	36,474	.54
RTD 716	Park-n-Ride	256,784	635,204	378,420	.40
RTD 721	Park-n-Ride	491,564	1,053,195	561,631	.47
RTD 737	Park-n-Ride	164,914	361,315	196,401	.46
RTD 755	Park-n-Ride	580,088	1,117,312	537,224	.52
RTD 757	Park-n-Ride	648,501	1,415,243	766,742	.46
RTD 758	Park-n-Ride	298,872	735,441	436,569	.41
RTD 760	Park-n-Ride	582,251	1,280,799	698,548	.45
RTD 762	Park-n-Ride	701,989	1,192,475	490,486	.59
RTD 764	Park-n-Ride	455,970	826,812	370,842	.55
OCTD 201	Park-n-Ride	100,187	201,431	101,244	.50
OCTD 203	Park-n-Ride	249,256	328,959	79,403	.76
OCTD 204	Park-n-Ride	38,894	94,055	55,161	.41
OCTD 209	Park-n-Ride	99,175	134,353	35,182	.74
OCTD 291	Park-n-Ride	87,185	166,686	79,501	.52
	Subscription	466,428	1,004,024	537,596	.46
	RTD Park-n-Ride	4,180,933	8,617,796	4,436,863	.49
	OCTD Park-n-Ride	<u>574,697</u>	<u>925,489</u>	<u>350,792</u>	.61
	TOTALS	5,222,058	10,547,309	5,325,251	.50

NOTE: These estimates were calculated based on current schedules and are not the same as the estimates calculated earlier which were based on FY 1979 operating data. Bus lines 760, 762, and 764 are assumed to be operating under early 1980 service levels which correlate to the time of the patronage counts for those lines.

3.2 OPERATING (FARE) REVENUE

The analysis of operating revenue focused on fares, ridership, and the sensitivity, or elasticity, of ridership to fares. Other ancillary revenue sources such as advertising were not considered as they would have only a marginal effect on the results.

3.2.1 Fares

Because of the many different ways that transit fares can be paid and the variance in the total fare that may be paid per trip, the average fare for each bus line was estimated heuristically rather than from observed data. In estimating the fares, the following assumptions were made:

- All users purchased a monthly pass which they used for forty trips per month. Those who paid a cash fare would be offset by those who paid a reduced fare (students, elderly, handicapped).
- The full cost of the monthly pass was attributed to the commuter/express bus. No discount or adjustment was made for those persons who transferred to or from another bus.
- Boardings were distributed uniformly across all suburban stations. In other words, the same number of persons boarded the bus at each suburban stop.
- All passengers had one trip end in the CBD.

Public Transit Fares

The recent fare increases by SCRTD were quite large, especially for commuter/express bus service. Fares have been calculated for both FY 80-81 and FY 81-82 and compared to show the percent increase. This percent increase will be used later to adjust ridership.

The average monthly fares for the SCRTD and OCTD lines are given in Exhibit III-2. SCRTD fares range between \$80 and \$104 per month while the OCTD fares are \$56.50.

Private Operator Fares

Private operators are in the business to make a profit and must compete with other private operators as well as with subsidized public transit districts. Therefore they tend to charge the lowest possible fare which will allow them to recover their costs plus a small percentage. Their fares are often calculated on a line-by-line basis. By minimizing the number of runs per line to ensure maximum ridership on each bus, they are able to keep the fare just as low as possible. Generally, a bus less than 80% full loses money and does not remain in service for very long without some revenue guarantees from a sponsoring firm or agency.

Using this very individualized approach toward determining fares for private commuter/express bus service, it is possible to have private fares that are higher than public fares in some cases and lower in others. In many instances today, the published fares for private services are very close to the comparable public fare.

PUBLIC TRANSIT FARES

<u>BUS LINE</u>	<u>TYPE OF SERVICE</u>	<u>FY 1981</u>	<u>AVERAGE MONTHLY PASS</u>	
			<u>FY 1982</u>	<u>% CHANGE</u>
RTD 501	Subscription	77.00	92.00	19.5
RTD 503	Subscription	84.00	104.00	23.8
RTD 504	Subscription	98.00	116.00	18.4
RTD 505	Subscription	80.50	106.00	31.7
RTD 507	Subscription	70.00	80.00	14.3
RTD 508	Subscription	77.00	92.00	19.5
RTD 509	Subscription	77.00	104.00	35.1
RTD 511	Subscription	77.00	104.00	35.1
RTD 716	Park-n-Ride	66.00	94.00	42.4
RTD 721	Park-n-Ride	58.00	82.00	41.4
RTD 737	Park-n-Ride	66.00	94.00	42.4
RTD 755	Park-n-Ride	62.00	88.00	41.9
RTD 757	Park-n-Ride	58.00	82.00	41.4
RTD 758	Park-n-Ride	58.00	82.00	41.4
RTD 760	Park-n-Ride	66.00	94.00	42.4
RTD 762	Park-n-Ride	58.00	82.00	42.4
RTD 764	Park-n-Ride	72.67	100.67	38.5
OCTD 201	Park-n-Ride	43.75	56.50	29.1
OCTD 203	Park-n-Ride	43.75	56.50	29.1
OCTD 204	Park-n-Ride	43.75	56.50	29.1
OCTD 209	Park-n-Ride	43.75	56.50	29.1
OCTD 291	Park-n-Ride	43.75	56.50	29.1

This economic analysis compares existing SCRTD and OCTD lines under public and private operating scenarios. The assumption is used that the private operators would charge the exact same fare as the public operator whenever that fare would provide a revenue at least six percent above the cost. Fares for services where this does not occur are increased until the revenue, adjusted for fare elasticity, reaches that threshold.

3.2.2 Elasticity

A recent survey of fare elasticity studies in the United States and Europe has resulted in the following generalizations:¹

- Transit fare elasticities range in value from -0.04 to -0.87 with a mean of -0.28 ± 0.16 .
- Small cities have larger fare elasticities than large cities.
- Off peak fare elasticities are double the size of peak fare elasticities.
- Of all trip purposes, the work trip is the most inelastic.
- No accurate fare elasticity comparisons are possible for express and local service due to scarcity of measurements.
- With one exception, very long-distance trips appear to be more elastic to fare changes than short- or medium-distance trips.

The commuter bus services under study serve generally the work market, occur during the peak periods, and exist in a very large urban area. These factors imply that the fare elasticity for commuter bus service should be less, perhaps much less, than the average. The long distance associated with the service implies that the elasticity should be somewhat higher. An idea of the magnitude of the impact on elasticities due to these factors is provided in Exhibit III-3.

A recent analysis of transit ridership in Los Angeles has resulted in elasticity estimates for SCRTD.² These estimates, which are tabulated in Exhibit III-4, are based on ridership levels before and after system fare changes and represent long term (6 months to one year) impacts. While the authors of the report admit that the impacts are clouded by such exogenous factors as service and headway changes, they contend that the elasticities are nonetheless useful "in providing first order estimates of the changes in demand which may be expected for certain price changes."

¹ Ecosmetrics, Inc. "Patronage Impacts of Changes in Transit Fares and Services", Sept. 3, 1980, UMTA Contract DOT-UM-90014.

² R. B. Cervero, M. Wachs, R. Berlin, R. J. Gephart, (UCLA) "Efficiency and Equity Implications of Alternative Transit Fare Policies," Aug. 1980, UMTA Contract DOT-CA-11-0019

SUMMARY OF FARE ELASTICITIES

<u>TOTAL TRANSIT TRIPS</u>	-0.28	(67 cases)
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CITY SIZE:

Greater than 1,000,000	-0.24	(19 cases)
500,000 to 1,000,000	-0.30	(11 cases)
Less than 500,000	-0.35	(14 cases)

TIME PERIOD

Peak	-0.17	(5 cases)
Off-peak	-0.40	(5 cases)
All hours	-0.29	(5 cases)

TRIP PURPOSE (Off-Peak)

Work	-0.11	(Trenton, N.J.)
Shop	-0.25	(Trenton, N.J.)
All Purposes	-0.19	(Trenton, N.J.)

NOTE: Data are compiled from independent groups of studies and may not be compared to the same control total.

SOURCE: Ecosmetrics, "Patronage Impacts of Changes in Transit Fares and Services," Sept. 3, 1980, UMTA Contract DOT-UT-90014.

SCRTD ELASTICITY ESTIMATES

USER GROUP	TIME OF DAY								
	PEAK			OFF-PEAK			ALL DAY		
	MIN	AVG	MAX	MIN	AVG	MAX	MIN	AVG	MAX
<u>Income</u>									
Under \$5,000	-.03	-.05	-.07	-.06	-.08	-.10	-.04	-.07	-.08
\$5,000 - \$9,999	-.03	-.05	-.08	-.08	-.10	-.15	-.05	-.07	-.10
\$10,000 - \$19,999	-.04	-.06	-.09	-.08	-.10	-.15	-.06	-.08	-.12
\$20,000	-.04	-.07	-.10	-.09	-.15	-.20	-.06	-.09	-.15
<u>Age:</u>									
5-13	-.03	-.04	-.06	-.05	-.07	-.10	-.04	-.06	-.08
14-18	-.03	-.04	-.06	-.06	-.08	-.10	-.04	-.06	-.09
19-23	-.04	-.05	-.07	-.08	-.10	-.13	-.05	-.07	-.10
24-31	-.05	-.07	-.08	-.09	-.12	-.15	-.07	-.08	-.13
32-45	-.06	-.07	-.09	-.09	-.13	-.17	-.07	-.10	-.15
46-52	-.06	-.08	-.10	-.10	-.15	-.20	-.08	-.11	-.17
53-62	-.07	-.10	-.15	-.10	-.17	-.25	-.09	-.13	-.20
63	-.40	-.50	-.70	-.25	-.40	-.60	-.20	-.30	-.50
<u>Gender:</u>									
Male	-.05	-.07	-.09	-.09	-.17	-.25	-.07	-.13	-.14
Female	-.04	-.05	-.08	-.06	-.13	-.20	-.09	-.15	-.17
Entire	-.04	-.09	-.10	-.07	-.15	-.20	-.06	-.10	-.15

SOURCE: R. B. Cervero, M. Wachs, R. Berlin, R. J. Gephart, (UCLA)
 "Efficiency and Equity Implications of Alternative Transit
 Fare Policies," Aug. 1980, UMTA Contract DOT-CA-11-0019.

SCRTD ELASTICITY ESTIMATES (continued)

User Group	Trip Length								
	less than 1.0-4.0			4.0-15.0			15.0-25.0 and greater		
	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum
<u>Income:</u>									
Entire System	-.04	-.07	-.13	-.06	-.09	-.17	-.09	-.15	-.20
under 5,000	-.08	-.11	-.15	-.05	-.07	-.09	-.07	-.08	-.10
5,000-9,999	-.06	-.09	-.13	-.07	-.10	-.13	-.09	-.12	-.16
10,000-19,999	-.05	-.08	-.11	-.09	-.12	-.15	-.13	-.16	-.20
20,000 and over	-.04	-.06	-.09	-.10	-.14	-.17	-.15	-.19	-.23
<u>Age:</u>									
5-13	-.10	-.13	-.17	-.06	-.08	-.10	-.09	-.11	-.14
14-18	-.10	-.12	-.15	-.08	-.11	-.13	-.11	-.13	-.16
19-23	-.08	-.11	-.13	-.10	-.13	-.15	-.14	-.16	-.19
24-31	-.08	-.09	-.10	-.13	-.15	-.17	-.17	-.20	-.23
32-45	-.06	-.07	-.08	-.13	-.15	-.17	-.20	-.22	-.25
46-52	-.05	-.06	-.07	-.15	-.17	-.20	-.20	-.24	-.28
53-62	-.04	-.05	-.06	-.08	-.13	-.18	-.14	-.17	-.20
63 and over	-.03	-.04	-.05	-.06	-.12	-.18	-.12	-.16	-.20
<u>Gender:</u>									
Male	-.04	-.07	-.10	-.09	-.16	-.23	-.18	-.22	-.27
Female	-.07	-.12	-.17	-.06	-.11	-.16	-.07	-.13	-.20

The results of this study indicate that the peak period fare elasticity for the entire system is -0.09. Trips longer than fifteen miles have an all day elasticity of -0.15.

Impact of Inflation

There is no question that inflation is a major factor to be considered when analyzing transit fare elasticities. At the same time, it is in many respects, a "red herring" which is not really germane to the issue.

Inflation is a continuous process that is always occurring, not a series of periodic quantum increases in the Consumer Price Index. Fares, on the other hand, are constant for a while and then increase in a stepwise progression.

The result of these two processes is that fares are continuously decreasing in real terms with periodic jumps representing fare increases. If a fare were increased by ten percent, six months later it would still be ten percent higher in real terms than it would have been without the increase.

Analyzing transit ridership during a period from six months before to six months after an increase, presents a situation where the fare itself would be decreasing consistently over time (assuming a constant inflation rate). For the second half of the period, the fare would be some percentage higher than if there had been no increase. Ridership characteristics of the system under study could be determined during the first half of the period. These characteristics could be extrapolated into the second half of the period and compared to the actual observed characteristics. Assuming that no other changes in transit service occur, the difference would indicate the impact of the percentage change in fare on transit ridership. The inflation rate, or its magnitude relative to the fare increase, has no bearing on the results.

Selection of Elasticity

The SCRTD data provide a range of elasticities from -0.09 for system level peak period trips to -0.15 for all day trips over fifteen miles. This range is well below the transit industry average of -0.28 and is consistent with the disaggregate averages for peak period and work transit trips. The midpoint of this range, -0.12, is an appropriate approximation for estimating the impacts of fare increases on commuter bus ridership.

It is important to remember that every line that will be studied will have its own fare elasticity and that will change for each station served along the line. A general elasticity parameter can, at best, only provide a rough estimate of the actual impact that a fare increase would have on any particular line. Since there is no reasonable way to obtain elasticities on a line-by-line basis, the general parameter is the best approach to use. It is very useful in obtaining order of magnitude impacts both on a system wide and line-by-line basis. The figure selected above will provide a reasonable estimate of fare increase impacts on commuter bus ridership.

3.2.3 Ridership

Both SCRTD and OCTD have estimates of ridership on each line which are periodically updated. The most recent OCTD estimates provide ridership numbers for November, 1980. SCRTD's latest estimates are for June, 1980.

The estimates described above come from actual counts on the bus lines themselves. While they can be used to represent the average daily ridership through the course of a year, they actually represent a spot check of the ridership at one particular point in time. It can be assumed that the ridership would remain fairly stable over one year's time as long as: (1) the service level did not change; and (2) the fare remained constant in real dollars. Another way of stating the second condition would be that at some point during the year the fare was increased by a percentage equal to the inflation rate.

The recent increases in fares by both districts are much greater than the current inflation rate and will have a detrimental effect on ridership. Therefore, the ridership estimates were adjusted using the following assumptions:

- The elasticity of commuter/express ridership to fares is -0.12;
- The current annual inflation rate is about 12 percent;
- Discounting the actual fare increase by the annual inflation rate will accurately reflect the impact of the increase over the following twelve months.

Exhibit III-5 shows the 1980 ridership estimates for both SCRTD and OCTD together with ridership estimates adjusted for the recent fare increases. The exhibit illustrates how insensitive ridership is to even very large fare increases.

3.2.4 Revenue

The annual revenues based on the fare and ridership analyses above have been calculated and are included in Exhibit III-5.

Total revenues for all of the bus lines under study are \$5,042,523, or about 52 percent of the total public cost. Total subsidy for the 22 bus lines is \$4,740,658.

3.3 ECONOMIC ANALYSES

The economic comparison of public and private operations is shown in Exhibits III-6 and III-7. This section summarizes the findings of that comparison and then develops a prototypical commuter/express bus line that will provide an example for analyzing new services in markets not currently served at all.

PUBLIC COMMUTER/EXPRESS TRANSIT SERVICE
RIDERSHIP AND REVENUE

<u>BUS LINE</u>	<u>TYPE OF SERVICE</u>	<u>1980 RIDERSHIP (DAILY)</u>	<u>1981 RIDERSHIP (DAILY)</u>	<u>AVE. NO. PASS.</u>	<u>ANNUAL REVENUE</u>
RTD 501	Subscription	NA	NA	92.00	55,200
RTD 503	Subscription	NA	NA	104.00	62,400
RTD 504	Subscription	NA	NA	116.00	69,600
RTD 505	Subscription	NA	NA	106.00	190,800
RTD 507	Subscription	NA	NA	80.00	48,000
RTD 508	Subscription	NA	NA	92.00	55,200
RTD 509	Subscription	NA	NA	104.00	124,800
RTD 511	Subscription	NA	NA	104.00	62,400
RTD 716	Park-n-Ride	353	335	94.00	188,940
RTD 721	Park-n-Ride	960	912	82.00	448,704
RTD 737	Park-n-Ride	386	366	94.00	206,424
RTD 755	Park-n-Ride	990	940	88.00	496,320
RTD 757	Park-n-Ride	1,718	1,633	82.00	803,436
RTD 758	Park-n-Ride	578	549	82.00	270,108
RTD 760	Park-n-Ride	1,438	1,365	94.00	959,860
RTD 762	Park-n-Ride	1,121	1,064	82.00	523,488
RTD 764	Park-n-Ride	869	829	100.67	500,733
OCTD 201	Park-n-Ride	80	77	56.50	26,103
OCTD 203	Park-n-Ride	144	139	56.50	47,121
OCTD 204	Park-n-Ride	81	78	56.50	26,442
OCTD 209	Park-n-Ride	161	156	56.50	52,884
OCTD 291	Park-n-Ride	41	40	56.50	13,560
	Subscription	NA	NA		668,400
	SCRTD Park-n-Ride	8,413	7,993		4,208,013
	OCTD Park-n-Ride	507	490		166,110
	TOTAL REVENUE				5,042,523

ECONOMIC COMPARISON OF PRIVATE &
PUBLIC COMMUTER/EXPRESS BUS OPERATIONS

BUS LINE	ANNUAL REVENUE	PUBLIC OPERATIONS				PRIVATE OPERATIONS			
		ANNUAL COST	PROFIT (SUBSIDY)	FAREBOX RECOVERY	SUBSIDY PER TRIP	ANNUAL COST	PROFIT (SUBSIDY)	FAREBOX RECOVERY	SUBSIDY PER TRIP
RTD 501	55,200	92,660	(37,460)	.60	NA	40,695	14,505	1.36	NA
RTD 503	62,400	87,393	(24,993)	.71	NA	50,513	11,887	1.27	NA
RTD 504	69,600	128,405	(58,805)	.54	NA	57,343	12,257	1.21	NA
RTD 505	190,800	256,125	(65,325)	.74	NA	117,816	72,984	1.62	NA
RTD 507	48,000	76,648	(28,648)	.63	NA	26,324	21,676	1.82	NA
RTD 508	55,200	93,907	(38,707)	.59	NA	43,114	12,086	1.28	NA
RTD 509	124,800	190,294	(65,494)	.66	NA	88,505	36,295	1.41	NA
RTD 511	62,400	78,592	(16,192)	.79	NA	42,118	20,282	1.48	NA
RTD 716	188,940	635,204	(446,264)	.30	5.22	256,784	(67,844)	.74	0.79
RTD 721	448,704	1,053,195	(604,491)	.43	2.60	491,564	(42,860)	.91	0.18
RTD 737	206,424	361,315	(154,891)	.57	1.66	164,914	41,510	1.25	-
RTD 755	496,320	1,117,312	(620,992)	.44	2.59	580,088	(83,768)	.86	0.35
RTD 757	808,436	1,415,243	(611,807)	.57	1.47	648,501	154,935	1.24	-
RTD 758	270,108	735,441	(465,333)	.37	3.32	298,872	(28,764)	.90	0.21
RTD 760	769,860	1,280,799	(510,939)	.50	1.47	582,251	187,609	1.32	-
RTD 762	523,488	1,192,475	(668,987)	.44	2.47	701,969	(178,501)	.75	0.66
RTD 764	500,733	826,812	(326,079)	.61	1.54	455,970	44,763	1.10	-
OCTD 201	26,103	201,431	(175,328)	.13	8.93	100,187	(74,084)	.26	3.77
OCTD 203	47,121	328,959	(281,838)	.14	7.95	249,256	(202,135)	.19	5.70
OCTD 204	26,442	94,055	(67,613)	.28	3.40	38,894	(12,452)	.68	0.63
OCTD 209	52,884	134,358	(81,474)	.39	2.05	99,175	(46,291)	.53	1.16
OCTD 291	13,560	166,686	(153,126)	.08	15.01	87,185	(73,625)	.16	7.22
Subscription	668,400	1,004,024	(335,624)	.67	NA	466,428	201,972	1.43	NA
RTD Park-n-Ride	4,208,013	8,617,796	(4,409,783)	.49	2.16	4,180,933	27,080	1.006	-
OCTD Park-n-Ride	166,110	925,489	(759,379)	.18	6.08	574,697	(408,587)	.29	3.27
TOTAL	5,042,523	10,547,309	(5,504,786)	.48	2.39	5,222,058	(179,535)	.97	0.18

EXHIBIT III-7

PRIVATE SECTOR FARE INCREASES
TO ACHIEVE A SIX PERCENT PROFIT

<u>BUS LINE</u>	<u>CURRENT AVG. MONTHLY PASS</u>	<u>FAREBOX RECOVERY</u>	<u>PERCENT FARE INCREASE FOR 6% PROFIT</u>	<u>ADJUSTED AVERAGE MONTHLY PASS</u>	<u>LOSS IN RIDERSHIP</u>
RTD 716	94.00	.74	53.0	144.00	21
RTD 721	82.00	.91	19.3	98.00	21
RTD 737	94.00	1.25	-	-	-
RTD 755	88.00	.86	27.5	112.00	31
RTD 757	82.00	1.24	-	-	-
RTD 758	82.00	.90	20.8	99.00	14
RTD 760	94.00	1.32	-	-	-
RTD 762	82.00	.75	50.5	123.00	64
RTD 764	100.67	1.10	-	-	-
OCTD 201	56.50	.26	*	-	-
OCTD 203	56.50	.19	*	-	-
OCTD 204	56.50	.68	70.3	96.00	7
OCTD 209	56.50	.53	140.6	136.00	26
OCTD 291	56.50	.16	*	-	-
RTD Park-n-Ride		1.006	6.2	-	59
OCTD Park-n-Ride		.29	*	-	-

*Six percent profit is not attainable at any fare level.

NOTE: The fare elasticity changes as the fare increase grows in magnitude. The drop in ridership for fare increases greater than 50 percent would probably be much greater than these estimates indicate.

3.3.1 Comparison of Existing Bus Lines

In the aggregate, the twenty-two transit district bus lines examined in the study would show an improvement in farebox recovery from .48 to .97 by converting to all private carriers and keeping the current fare structure intact. Because of their lower costs, municipal operators would experience results of smaller magnitude than those shown here. Subsidy per trip for the park-and-ride services would decrease from \$2.39 to \$0.18. There are large differences between subscription and park-and-ride service as the discussion below indicates.

RTD Subscription Service

The RTD subscription buses are currently operating at a farebox recovery ratio of 0.67 which is far better than the system average. It has an annual deficit of \$335,624.

Private operation of the same service could be provided at a 43 percent profit. This may be somewhat over-stated as the cost of line #507 is probably underestimated due to the bias in the private cost model for short distance lines (18.5 miles). It is still very probable that private carriers could reduce fares for this service and yet return a good profit.

Because of the high farebox recovery ratio, it is unlikely that SCRTD would like to convert the service. Loss of these lines would have the net effect of reducing SCRTD's overall operating ratio which would be undesirable for them.

RTD Park and Ride Service

Analysis of the nine RTD Park-and-Ride bus lines shows that they currently operate with a farebox recovery ratio of 0.49. This is just slightly better than the systemwide average of .44 for fiscal year 1981. However, the service still shows an annual deficit of over \$4 million and a subsidy per trip of \$2.16.

Operation by private carriers shows a profit of 0.6 percent, or \$27,080 when no adjustment is made to the fare. The subsidy per trip of \$2.16 is totally eliminated. An increase in the fares for the entire service of only 6.2 percent would provide sufficient revenue for a six percent profit with a loss in ridership of 0.7 percent, or 59 trips. These findings are based on private cost estimates that are biased upward. It may be very possible that this entire service could be operated at an acceptable profit by private carriers with no change in fares.

On a line-by-line basis, four of the lines would be profitable with no increase in fares: 737, 757, 760, and 764. Three more lines would be profitable with fare increases of less than thirty percent: 721 (19.3%), 755 (27.5%), and 758 (20.8%). The remaining two lines would require fare increases of greater than fifty percent: 716 (53.0%), and 762 (50.5%). These two bus lines would probably need more than a fare increase to become profitable since the elasticity would most likely be greater than -0.12 for such large fare increases. Perhaps a combination of fare increases and service reductions would be warranted for these lines.

In general, the analysis of the RTD Park-and-Ride service indicated that the service could be operated profitably by private carriers. A fare increase to raise the profit margin to 6 percent might cause a drop in patronage of less than one percent, and some decrease in ridership due to service cutbacks might result. These negative impacts could be offset by the elimination of an annual subsidy requirement of \$4.4 million, or \$2.16 per trip. The annual subsidy that could be saved for a person who rides the bus every weekday is \$1,103.

OCTD Park-and-Ride Service

OCTD Park-and-Ride service operates with a very high subsidy as its 0.18 farebox recovery ratio indicates. This is slightly lower than their systemwide average of .20. This is due to very low fares coupled with a ridership that averages about 24 riders per bus. Subsidy per trip averages \$6.08 per trip, or \$3,101 per year for a person who rides the bus every weekday. A person riding bus number 291 every weekday is subsidized \$7,655 per year.

Of the five bus lines examined, two could be operated profitably under private operation: 204 and 209. However, they would require fare increases of 70.3 and 140.6 percent, respectively, assuming that the fare elasticity would not change for these large increases. This would require the fares to be \$96.00 to \$136.00 per month. Most likely fare increases of this magnitude would result in a far greater loss in ridership than shown here. The other three bus lines could not achieve profitable revenues at any fare level without accompanying service cutbacks.

Raising fares by 67.1 percent to \$94.00 per month would make them comparable to RTD fares. Assuming this fare level for the private operations, and constant elasticity the annual subsidy for all five bus lines could be reduced from \$655,000 to \$406,553. This is \$3.21 per trip.

It might be possible for small private operators to provide the service by utilizing worker-drivers exclusively. As indicated earlier, this might produce the kind of cost savings needed to put the service in the black.

3.3.2 Prototypical Commuter/Express Bus Line

Evaluating the economics of any new commuter/express services will have to be done on a line by line basis as opportunities arise. The following is an economic comparison of a prototypical bus line which might be proposed in some corridor which is not currently being served by private or public carriers. The characteristics of the line are based on average characteristics of the nine RTD Park-and-Ride bus lines which were examined in this study. This comparison is shown in Exhibit III-8.

The typical commuter express bus line has a route length of 31 miles and averages 26 miles per hour. It provides twelve runs into an employment center during the morning peak and twelve away from the employment center in the afternoon. The public operator carries an average of 36 passengers per bus at a monthly rate of \$87.74. The public operator receives a farebox recovery ratio of 0.49 and has an annual subsidy of \$476,673. The subsidy per trip is \$2.16. The annual subsidy to an individual who rides the bus every weekday is \$1,103.

ECONOMIC COMPARISON OF A
PROTOTYPICAL COMMUTER/EXPRESS BUS LINE

<u>Route Description</u>	<u>Public</u>	<u>Private</u>
One Way Route Miles	31.0	31.0
One Way Route Time	71.5 minutes	71.5 minutes
Daily Trips In/Out	12/12	12/12
Annual Revenue Miles	189,720	189,720
Annual Revenue Hours	7,297	7,297
Average Speed	26 mph	26 mph
Monthly Pass	\$87.74	\$93.18

Ridership

Daily Ridership	864	858
Riders Per Bus	36	36

Economic Comparison

Annual Cost	931,537	452,250
Annual Revenue	454,863	479,710
Profit (Subsidy)	(476,673)	27,460
Subsidy Per Trip	\$2.16	-0-
Farebox Recovery	0.49	1.06
Annual Subsidy to a Regular User	\$1,103	-0-

The private carrier operates the exact same service, but charges a higher fare so that he achieves a six percent profit. He charges \$93.18 per month and still carries almost 36 passengers per bus. His annual profit is \$27,460. There is no subsidy per trip.

Operation by a private carrier saves the community the entire subsidy for the service, or \$476,673. In addition, a \$27,460 profit per year is being realized by a local enterprise. Therefore, the entire benefit to the community is \$504,133. From this must be subtracted the additional \$49,693 in fares paid by the 858 riders; an average of \$57.92 per year per rider. Only six daily riders are lost due to this increase in fares.

The final analysis, then, is that choosing a private carrier over a public operator nets a financial benefit to the community of \$454,440 at the cost of losing six riders per day. Since this is a new service, however, those six riders are not losing a service, they simply choose not to take advantage of a new service. The public operator has not been required to add \$476,673 to its annual deficit and may choose to spend that money on another transit service somewhere else in the region.

4.0 THE INSTITUTIONAL AND REGULATORY CONTEXT

This chapter describes and examines the institutional and regulatory context within which private and public carriers operate. The California Public Utilities Commission (CPUC) regulates all private carriers. Public transit agencies are governed by their enabling legislation, other sections of the California Public Utilities Code and pertinent Federal regulations.

This chapter is divided into the following main categories:

- California PUC regulations and practices;
- State public transit legislation;
- Federal regulations and legislation; and
- Collective bargaining agreements.

4.1 CALIFORNIA PUC REGULATIONS AND PRACTICES

All private bus operators in the state of California are regulated by the California Public Utilities Commission (CPUC). Regulations are based on pertinent sections of the Public Utilities Code, General Orders and individual decisions of the Commission. Regulated Carriers are licensed as either Passenger Stage Corporations or Charter-Party Carriers of Passengers.¹ Basic distinctions between these types of operations have to do with routing and fare arrangements. Passenger Stage Corporations must operate between fixed termini or over regular routes and normally collect individual fares.² Charter-Party Carriers of Passengers may not operate on fixed routes or with fixed schedules and cannot collect individual fares.

¹ Rules and regulations pertaining to passenger stage corporations are found in the Public Utilities Code Div. 1, Article 2, Sections 225, 226, 1031 through 1063.5. Rules and Regulations pertaining to Charter-Party Carriers of Passengers are found in the Public Utilities Code. Div. 2., Articles 1-6, and Chapter 8, Sections 5351-5419. Charter-Party Carriers of Passengers certificates are issued in Classes A, B and by permit.

² PUC Div. 1., Article 2, Section 5401.

Both passenger stage corporations and charter party carriers of passengers must satisfactorily meet CPUC "public convenience and necessity" requirements before being issued a certificate to operate. Although each application for a certificate in a particular area or on a particular route is examined by the CPUC on a case-by-case basis, and there are several complicating factors involved, the general rule is that existing carriers providing satisfactory service are protected from unfair competition by other private carriers. This does not necessarily mean that only one carrier can operate in a given area over a given segment of highway, however. In some cases, more than one certificate is issued over individual routes and portions of routes. Recent decisions handed down by the CPUC reflect a shift away from a strict construction of Section 1032 franchise rights in favor of limited competition between operators.³ In evaluating applications for new service, the Commission currently examines such factors as differences in schedules, fares, pick-up and drop-off points, clientel to be served, and demonstrated demand rather than making either/or determinations based on showings of unsatisfactory service.

4.1.1 Certification

In order to obtain the required certificate an operator must submit an application to the Commission and show that public convenience and necessity require the proposed service. The Commission may, with or without a hearing, issue the certificate as applied for, refuse to issue one, or issue one which attaches conditions or restrictions which the Commission feels public convenience and necessity require.

It should be noted that although the CPUC only regulates private operators (as opposed to public operators), the Commission does take into account service provided by public operators in the area or on the route in making its determination of public convenience and necessity. Also, it is not unusual for a public operator such as SCRTD to petition the CPUC against the granting of a certificate to a private operator when, in the judgement of the transit district, the proposed service will adversely affect its operation.

4.1.2 Fares

The CPUC also regulates the passenger fares and operating practices or "tariffs" of commuter bus operators. When the Commission approves the initial application for passenger stage authority, fares are set, generally at the amounts proposed by the applicant. Thereafter, the operator must receive approval from the Commission to change fares. This is

³ Especially since the January 29, 1980 CPUC landmark decision granting American Buslines (Trailways) a certificate to compete over specified Southern California routes already served by Greyhound.

done by filing an application with the Commission, whereupon CPUC staff reviews the application and determines the operator's rate of return, operating ratio (costs/ revenues), and financial projections based on the proposed fares. The Commission seeks to ensure that the operator maintains a healthy financial posture without taking advantage of its passengers. If a fare increase is not excessive, the time to resolve an appeal is generally on the order of three to six months.

4.1.3 Other Regulations

The CPUC attempts to ensure the safety of commuter bus operations and protect passengers by examining the fitness and business responsibilities of the applicant, requiring minimum insurance coverage. In addition, the Highway Patrol conducts periodic safety inspections and the Department of Motor Vehicles tests the bus drivers.

Each application for authority should describe the applicant's previous experience in providing transportation, if any, attach a financial statement indicating assets and liabilities and provide a list of the vehicles which will be used.

These factors are used by Commission staff to evaluate the competence of the applicant. The Commission also requires that bus operators carry public liability and property damage insurance with specified minimum coverage varying with vehicle size. A full sized bus must carry a minimum of \$100,000 for a single injury or death and \$700,000 in the event of multiple death or injury.⁴

The Department of Motor Vehicles requires that commuter bus drivers carry a Class II driver's license, which is issued after passing the appropriate test given by the DMV. This is the same class of license which is required for vanpool drivers.

Finally, the California Highway Patrol is responsible for adopting and enforcing rules and regulations to promote the safe operation of buses.⁵ This is done in conjunction with an advisory committee made up of regulated carriers. The rules and regulations pertain to many aspects of commuter bus service including: 1) the bus driver's hours of work; 2) bus equipment and maintenance; 3) recordkeeping; 4) transportation of passengers; and 4) accident reporting.*

⁴ CPUC General Order 101-C.

⁵ Vehicles designed for carrying not more than 12 persons, including the driver, maintained and used in the non-profit transportation of adults to and from a work location as part of a carpool program or when transporting only members of the owners household are not considered to be "buses" (Section 233 of the Motor Vehicle Code).

For example, the Highway Patrol rules and regulations (found in the California Administrative Code, Title 13, subchapter 6.5) specify that buses shall carry certain types of fire extinguishers, be equipped with shielded heating and ventilation systems, have emergency exits, be clearly identified with name or trademark on the outside, etc. Among the rules and regulations pertaining to the transportation of passengers is one which states that a bus may not operate with passengers standing unless the bus is equipped with grab handles (few private commuter buses are so equipped).

The Highway Patrol is also authorized and funded to inspect the records, vehicles, and maintenance facilities of bus operators to ensure compliance with the state's rules and regulations. They may also prohibit the movement of vehicles found in violation of the Code until such violations are corrected.

4.1.4 Expedited Temporary "Home-To-Work" Passenger Stage Authority

In the past, a major problem with the CPUC regulatory process was the long time period required for the Commission to issue a decision granting a passenger stage certificate for a commuter ("home-to-work") bus route. If an operator put together a group of enough interested riders to support a new route and then applied for authority, there was little chance that after the 3 to 10 months required for a decision the riders would still be interested.

In November 1979, the Commission, after receiving a request from SCAG and Commuter Computer, approved a new optional procedure for applicants who desire authority for a "home-to-work" bus service. The procedure speeds uncontroversial applications and produces a decision within 30 to 45 days of the date of filing. The authority is temporary (it automatically expires after one year) but the operator may apply for permanent authority any time during the one year period if the service appears to be successful. Insurance and safety requirements apply to the expedited commuter bus authority as well as the permanent authority.

The new procedure is optional, however, and some operators choose not to make use of it. One reason for ignoring this option is the fact that no "Section 1032" rights (granting exclusive rights) accompany the expedited authority. The Commission can decide to grant authority for the same route to one or more additional applicants if it so chooses.

Another reason an applicant may be unable to make use of the new procedure is that if the application is protested, it automatically requires use of the regular application procedure. The next section discusses the matter of protests.

4.1.5 Protests Against Granting of New Authority

When an applicant seeks either temporary or permanent authority for a passenger stage certificate, the applicant must serve "all interested parties" with copies of the application at the time the application is submitted to the CPUC. In addition to notifying the city clerks of the cities to which service will be offered, the applicant must notify counties, Regional Transportation Planning Agencies, all existing passenger stage corporations, and all transit districts in the territories to be served.

While anyone may protest an application, the typical protest is from another public or private bus operator who is seeking to protect its existing service or franchise. Many private bus operators will protest if the proposed service is at all similar to theirs and the Commission must decide whether the proposed service will actually serve the same market as the existing service. Frequently, a hearing is required and this delays matters typically for 3 to 6 months. The Commission is not obligated to grant a hearing just because a protest is filed, however. The protest must both be substantive and present issues that cannot be resolved without a hearing. The Commission's Bus Service Development staff reviews applications and protests and will endeavor to help the concerned parties reach agreement without a hearing whenever possible. Non-substantive or resolvable protests will usually not delay the authorization of new bus services. In such cases a hearing will not be granted; rather, the new service will be authorized directly by Exparte Order.

The transit districts in the SCAG region have both protested many commuter bus applications. Both seek to have the applicant sign a waiver stating that they consent to the transit district providing service in the future which may "directly or indirectly..divert, lessen, or compete for the patronage or revenues" of the private operator's proposed service. The districts are concerned because their enabling legislation restricts their ability to compete with a private operator and both have bought the rights of private operators in the past in order to provide transit service. If such a waiver can be obtained the districts generally do not protest the CPUC application, although SCRTD has protested applications for service which it felt would compete with existing SCRTD service.

Private operators seeking relief from competition by public transit operators do not have recourse through the CPUC because the CPUC has no jurisdiction over publicly owned and operated transit systems. Private operators may have other recourse avenues, particularly civil court inverse condemnation suits.

There are, however, protections for existing private operators built into the state laws establishing transit districts as well as federal laws providing transit funding assistance. The protection provided under state transit district law applies to public and private utilities, including municipal operations.⁶ The protection provided by federal law applies

⁶ PUC, Div. 10, Pt. 3, Section 30637 for SCRTD. PUC, Div. 10 Pt. 4 Sec. 40221 for OCTD.

to the private intercity charter bus industry.⁷ A detailed discussion of pertinent provisions of these laws is included in the following section of this report.

4.1.6 Publicly Supported Private Operations

When public entities contract for service from a private carrier, that carrier must obtain a passenger stage certificate of public convenience and necessity from the CPUC for the route(s) in question. A good example of the type of arrangement is the County Interconnect between Ventura, Oxnard and Thousand Oaks. Were the County of Ventura to operate the service directly, or through South Coast Area Transit (SCAT), as part of a publicly owned transit system, the CPUC requirement would not be necessary.

This type of distinction is not especially important where there is limited service, and little, if any competition. It does become important in cases of service expansion, however, because other private carriers holding certificates on that route would predictably oppose significant increases in this County sponsored operation. Again, if the County Interconnect were to be run as a public operation, the private operators would not have recourse to petition the CPUC to limit or deny a proposed service increase.

It should be noted that the above discussion is limited to the regulatory context under which these systems operate. There are several other important factors which enter into decisions on how to organize transit providers, particularly differences in cost and differences in the degree of local control over operations and funding.

Both state and federal capital and operating support for transit bring with them a significant set of regulations and reporting requirements which local government may wish to avoid, despite the availability of this additional funding.

4.1.7 Non-regulated Commuter/Express Service

One way to completely avoid both private and public regulatory structures and still provide long distance commute service is through the formation of vanpools. Where the driver himself is on the way to or from his place of employment and the vehicle has a seating capacity of 15 passengers or less, certificates are not required and the PUC does not have jurisdiction.

Buspools (defined by seating capacity over 15 persons) typically do require certification, but for commuter runs from one or two pick-up points to one or two private places of employment, the necessary passenger stage certificates can routinely be obtained provided that financial, insurance and safety matters have been taken care of.

⁷ Urban Mass Transportation Act of 1964, as amended, Section 1602(3)(f).

A simpler arrangement is for a firm to directly operate and pay for commuter bus service for its employees. In these cases the service is exempt from CPUC regulation. Persons or firms interested in establishing unregulated types of commuter service can significantly shorten the start-up time required to begin operations. This can be a formidable issue because, for example, it takes from one to four months to obtain a Passenger State Corporation certificate when the application is uncontested using the regular application procedure.⁸ If a protest is filed, and in this area few applications are not contested, it takes about two to three months to get a hearing and another two to three months for review. Generally, then, a final decision is usually issued within four to six months.

4.1.8 Deregulation and Subsidies

As noted earlier, the current trend of CPUC decisions has been to move away from a strictly protectionist posture. This is in keeping with similar actions in other transportation markets such as airlines, trucking and railroads. Although the certificate/ permit process is less strict regarding competition for commuter services between designated residential centers in contrast to inter-city service available to the general public, it appears that there is considerable recent support by the CPUC for limited competition along inter-city corridors.

At the local level, Ventura, Riverside and Los Angeles Counties utilize TDA Article 8 funds to subsidize private operators to provide commuter/ express service. San Bernardino County has expressed an interest in doing the same. The potential for such arrangements within Orange County is complicated by the fact that the Orange County Transit District is coterminous with the County of Orange. This situation is addressed in more detail in the sections which follow.

4.1.9 Opportunities for Improvements in Inter-Operator Relationships

A recent application by Great American Stageline to significantly expand inter-city service in the U.S. 101 corridor (connecting with LAX) indicates that pre-application discussions between potential operators, local political jurisdictions, and the Bus Service Development staff of the CPUC, could facilitate service improvements and cut down on protests to service expansion. In this case, Great American Stageline's application was initially protested by local jurisdictions arguing that the proposed service was not integrated with existing service. Greyhound also protested against what it felt was unfair competition. The County of Ventura's position was that it was not adverse to increased Great American Stageline service along U.S. 101, but that the proposed service should be supplemental to rather than duplicative of existing service.

An informal meeting was held between operators in that area and county representatives to examine the issues at hand - and as a result the County discontinued its objections to the proposed service changes. Great American's application was approved subsequently by the CPUC.

⁸ As noted above, expedited temporary authority can be obtained in some cases for home-to-work type service if there is no protest.

Although it is impossible to predict how the CPUC will rule on any given case, especially in times of increasing demand and lessening restrictions, it is clear that attempts to accommodate competing interests at the pre-application stage could be beneficial to both operators and the public. Over the last few years 97 percent of all applications have been approved.

4.1.10 Alternative Modes

Another factor which will bear heavily on inter-operator relationships is the amount of success subscription type vanpool and bus services have in capturing commuter trips in a given corridor. As discussed above, market entry is substantially less complicated for these types of services and with informational, organizational and in some cases, financial support from local public agencies, Caltrans and Commuter Computer, there is a real potential for vanpool and subscription services to capture a greater share of the commuter trips than they presently do.

Vanpool and subscription-commute bus services are extremely efficient in that they are generally operated at or near full capacity. They are also attractive to local governments in that there is no need for substantial financial or operational participation. Further, the energy conservation and air quality payoffs for these types of operations are extremely high in comparison to other alternatives.

4.2 STATE PUBLIC TRANSIT LEGISLATION

The legislation which created OCTD and SCRTD includes provisions affecting relationships between these transit districts and other operators. These provisions apply to competition between the districts and publicly or privately owned public utilities. CPUC certificated passenger stage corporations operate as privately owned public utilities .

Municipalities and joint powers agencies which operate transit systems do so as publicly owned public utilities.

As noted earlier, the pertinent provisions concerning SCRTD are different from those applicable to OCTD. The SCRTD legislation includes what can be called a "consent" clause. OCTD operates under what is commonly known as a "buy-out" clause.

4.2.1 Southern California Rapid Transit District

The specific language applicable to SCRTD is as follow:

Subsection 30637. Control over or interference with transit facilities of cities or public agencies prohibited; exceptions

"The district shall not exercise control over any transit facilities now or hereafter owned and operated wholly or partly within, or without, the district by any city or public agency, unless by consent of such city or public agency and upon such terms as are mutually agreed upon between the board and such city or public agency.

"The district shall not establish, construct, complete, acquire, operate, extend or reroute (all of the foregoing being hereinafter referred to by the word "establish" in all forms thereof), directly or indirectly, either itself or by lease or contract with any other person or persons or otherwise, any rapid transit service or system in such manner or form as will or may, either then or at any time in the future, divert, lessen or compete for the patronage or revenues of the existing system of a publicly or privately owned public utility without the consent of the said utility.

The maintenance and operation but not the extension or rerouting, of any existing system acquired by the district from a publicly or privately owned public utility shall not be deemed to be the establishment of a rapid transit service or system within the meaning of this section.

The construction by the district of any structures constituting a method of rapid transit, and the operation therein and thereon of any equipment except buses, shall not be deemed to be the establishment, construction, completion, acquisition, operation or extension of rapid transit within the meaning of this section."⁹

It is the general policy of SCRTD not to place itself in competitive situations with other operators. Exceptions have occurred, however, in respect to both publicly and privately owned transit providers. The district has negotiated several cooperative agreements with municipal operators and OCTD which spell out mutual operating rights in areas where the systems interface. In the case of private utilities, SCRTD planning department staff typically is able to avoid competitive situations by engaging in discussions with private operators potentially affected by the establishment of new SCRTD service. Examples of such situations include the introduction of BEEP service in the El Segundo area, where several operators were involved and arrangements with COM-BUS concerning commuter service to Century City.

As noted in the section of this report dealing with CPUC regulations and practices, SCRTD has protested applications for passenger stage certificates by private operators before the CPUC on several occasions. This type of situation is much more common than those described above in which the district was establishing new service. Here the issue is not one of Subsection 30637 protection and the resolution point is a decision by the CPUC over a private operator's claim of public convenience and necessity.

⁹ USC 1618., Section 22.

4.2.2 Orange County Transit District

The pertinent sections of OCTD's legislation are as follows:

Subsection 40221. Definitions

As used in this chapter:

(a) "Establish" includes establish, construct, complete, acquire, extend, or reroute. it does not, however, include the maintenance and operation of any existing system acquired by the district.

(b) "Existing system" means any transit service or system of a publicly or privately owned public utility situated entirely within Orange County, or at least 75 percent of whose revenue miles for the preceding calendar year were operated within Orange County, and has been in operation since at least January 1, 1982.

Subsection 40222. Notwithstanding any other provision of this part, before the district may propose to establish any transit service or system which may at any time divert, lessen, or compete for the patronage or revenues of any existing system, the district shall give a written notice to the public utility which is operating the existing system. The written notice shall describe the transit service or system which the district proposes to establish and shall state the time within which the district proposes to establish the service or system.

Subsection 40222.5 Purchase of existing system

The district shall not establish the proposed service or system, or maintain and operate the service or system until it has completed the purchase of the existing system or any part thereof.

Subsection 40223 Purchase price

The purchase price to be paid for the existing system, or any portion thereof to be purchased, shall be the reproduction cost new, including going concern value, at the date upon which the district commences negotiations for the purchase of the existing system, or the portion of the existing system, less depreciation, including wear, tear, and obsolescence, if any.

Subsection 40223.5 Arbitrating purchase price

The district and the public utility operating the existing system may agree upon the purchase price or they may agree that the purchase price is to be established by arbitration and upon the method of naming arbitrators and the method of conducting such arbitration. If they do not, the purchase price may be fixed and judgment entered thereon in a suit brought either by the public utility or the district in the superior court in and for the county in which is located that portion of the existing system to be acquired by the district which has the highest value.

(Added by Stats. 1965, c. 1899, p. 4400, subsection 1.)¹⁰

Although the provisions noted above have created some difficulty for OCTD with regard to community-based service, the district has never experienced conflict with a private operator in a case involving new commuter-express service proposed or established by OCTD. This is a result of adherence to district policy against such competition and conscious effort by OCTD to investigate the presence or absence of private operating authority prior to the development of proposed new routes. Given the presence of private express service in major Orange County corridors, significant expansion of commuter-express service by OCTD would create a potential "buy out" situation.

Under the provisions of AB 1009, however, only those services which were in operation before January 1, 1982 would be subject to a potential "buy out".

4.2.3 Municipal Operators, Counties and Joint Powers Agencies

Although the bulk of commuter-express service is provided by transit districts and private carriers, several municipalities in Los Angeles County also operate such service. Ventura County and Los Angeles County contract out commuter service with private operators as does Riverside Transit Agency.

The legal basis for local government transit operations (and by extension, JPA's) is found in the Constitution of the State of California (Article XI, Section 9, Utility Powers) and further regulated by the Transportation Development Act of 1971 as amended. Generally, those routes traveling outside municipal boundaries which were in operation prior to March 1, 1971 are protected under provisions of the TDA. Routes established after that time (within the boundaries of SCRTD and OCTD) have been established through negotiated Cooperative Agreements with the districts.

Outside the boundaries of the two transit districts there are no constraints on local governments in respect to the establishment of transit service. Relationships between non-transit district governmental operators and private operators differ from those of transit districts only in the sense that these operators are not subject to either the "consent" or "buy-out" provisions noted above. A private operator wishing to establish routes within a given local political jurisdiction must notify the jurisdiction and provide a copy of its CPUC application. The concerned local government then makes a determination as to whether or not the proposed service will adversely affect its operations and acts accordingly to either support or protest the application before the CPUC. Again, it should be noted that the CPUC only has jurisdiction over private operators; save for the constraints on transit districts noted above, local governments are not encumbered from establishing service within their jurisdictions.

¹⁰ PUC, Div. 10 Pt. 3 Section 30637.

4.3 FEDERAL REGULATIONS AND LEGISLATION

Recipients of capital and operating funds from UMTA must comply with a large number of federal statutes, rules and regulations. Included in the UMTA Act of 1964, as amended, are two provisions directly related to public/private operator interface as discussed in this report.

These are 1602 Section 3 (e) which provides certain protections for private mass transportation companies and Section 1609 Section 13(c) which provides protection for employees effected by UMTA financial assistance.

Pertinent references in 1602 Section 3(e) state that:

"No financial assistance shall be provided under this Act to any State or local public body or agency thereof for the purpose, directly or indirectly, of acquiring any interest in, or purchasing any facilities or other property of a private mass transportation company, or for the purpose of constructing, improving, or reconstructing any facilities or other property acquired (after the date of the enactment of this Act) from any such company, or for the purpose of providing by contract or otherwise for the operation of mass transportation facilities or equipment in competition with, or supplementary to, the service provided by an existing mass transportation company, unless (1) the Secretary finds that such program, to the maximum extent feasible, provides for the participation of private mass transportation companies, (2) just and adequate compensation will be paid to such companies for acquisition of their franchises or property to the extent required by applicable State or local laws.⁷

To date there have not been any events in this area which raise the issues contained in this statute. Apparently, local public transit operators have success fully avoided conflicts of this type and carried out their responsibilities in accordance with the stipulations noted above.

1609 Section 13(c) of the UMTA Act reads as follows:

It shall be a condition of any assistance under section 3 (later extended to Section 5) of this Act that fair and equitable arrangement are made, as determined by the Secretary of Labor, to protect the interests of employees affected by such assistance. Such protective arrangements shall include, without being limited to, such provisions as may be necessary for (1) the preservation of rights, privileges, and benefits (including continuation of pension rights and benefits) under existing collective bargaining agreement or otherwise; (2) the continuation of collective bargaining rights; (3) the protection of individual employees against a worsening of their positions with respect to their employment; (4) assurances of employment to employees of acquired mass transportation systems and priority of reemployment of employees terminated or laid off; and (5) paid training or returning programs. Such arrangements shall include provisions protecting individual employees against a worsening of their positions with respect to their employment which shall in no event provide benefits less than those established pursuant to section 5(2) (f) of the Act of February 4, 1887 (24 Stat. 379), as amended. The contract for the granting of any such assistance shall specify the terms and conditions of the protective arrangements."

The Section 13 (c) labor protection provision is potentially the most important impediment to changes in the organization of transit providers in this area. Although the specifics of any given action will determine whether a 13(c) issue arises and how it is resolved, some generalizations can be advanced. 1) The threat of a 13(c) conflict has a dampening effect on transit properties as regards potential cost-cutting strategies which might be implemented in the absence of such constraints - e.g. changes in work rules, certain service abandonments, contract and sub-contract arrangements. 2) Properties engaged in service expansions are far less susceptible to 13(c) problems than those involved in service cut-backs.

This is because employees who experience work changes can be readily assigned to comparable situations during service expansions. 3) An employee whose position is worsened solely because of decreased funding available to the transit operator is not eligible for 13(c) benefits.

4.4 COLLECTIVE BARGAINING AGREEMENTS

In addition to the general employee protections provided by Section 13(c) of the UMTA Act, employees of all public transit operators in the region are protected by the specific provisions included in their local collective bargaining agreements. Although there are several variations on the theme, depending on the property and bargaining unit in question, the thrust of the pertinent provisions of these contracts is to limit sub-contracting in favor of having work done by bargaining unit members. SCRTD and OCTD agreements with the United Transportation Union preclude the districts from adversely effecting employment levels by sub-contracting.¹¹

There are two relevant points in the SCRTD agreement which should be noted.¹² First, the operation of revenue equipment is restricted to qualified SCRTD operators. This means if SCRTD were to sub-contract, the private carrier has to have its own vehicles. Secondly, the SCRTD can not reduce the hiring of new employees as a result of sub-contracting. For all practical purposes, the SCRTD can not sub-contract the operation of its routes.

The OCTD - UTU contract is similar to the SCRTD case.¹³ In fewer words, OCTD can not utilize sub-contractors to operate community fixed-route services such as their Easy Rider routes. (Dial-A-Ride services are presently sub-contracted.)

Most municipal operators and JPAs have similar contractual provisions although these are generally not as "tight" as those involving the transit districts.

¹¹ PUC, Div. 10 pt. 3 Section 30637

¹² Contract between the United Transportation Union and SCRTD, Article 7, Section 2, p. 19.

¹³ Contract between the United Transportation Union and OCTD, Article 46, p. 75.

In summary, it may be difficult for the public carriers to subcontract their existing express routes under current labor agreements. Furthermore, any conversion from public to private operations may be subject to legal challenge if the result is to reduce the overall work force. If an existing express route is cancelled and the employees re-assigned to perhaps new or expanded local routes, however, then no labor problem should result from transferral of the express route to the private sector.

5.0 EVALUATION OF ALTERNATIVE PUBLIC AND PRIVATE OPERATING SCENARIOS

Five scenarios concerning possible future developments in commuter/express bus operations have been postulated. These scenarios represent varying levels of service provided by public and private carriers. They include:

- Scenario 1 - Expansion of Public Commuter Bus Services

Under this scenario, public commuter bus services would continue to expand to compete with private sector operations. SCRTD and OCTD will increase express and park and ride fleet for shorter headways and a greater geographical coverage.

- Scenario 2 - Expansion of Private Commuter Services: No Public Funds.

Under this scenario, private commuter services are expanded, while public transit operations are maintained at current levels. No public funds are used to expand private services.

- Scenario 3A and 3B - Expansion of Private Commuter Services: With Public Funds.

Under this scenario, public funds will be used to contract with private operators to expand commuter bus services. Public transit operations are maintained at current levels. Scenario 3A limits the use of public funds to marketing and other promotional expenditures. Scenario 3B will involve use of public funds to contract with private operators.

- Scenario 4 - Replacement of Public Operations by Private Companies: No Public Funds.

Under this scenario, current public express routes are transferred to private operators. No public funds are supplied and existing levels are maintained.

- Scenarios 5A and 5B - Replacement of Public Operations by Private Companies: With Public Funds.

Under this scenario, public funds are supplied to private operators, who will take over existing public express routes. Existing service levels are maintained. Scenario 5A will limit funds solely for marketing, other promotional activities and facilities such as part-and-ride lots. Scenario 5B will include additional funds.

From the responses to questions on the scenarios emerges a few critical issues deserving further discussion. These issues concern:

- transit district waiver provision
- transit district contracting authority
- funding channels and restrictions
- avoiding negative impacts on labor
- coordination of public and private operations

As was described previously in the section on PUC regulations and practices, transit districts seek to have an applicant sign a waiver acknowledging their future rights to operate competitive service. With such a waiver, the districts generally do not protest a PUC application. There are two parts to this critical issue. First, in spite of a protest, the PUC may still grant a certificate to operate. Secondly, private operators remain hesitant to operate new services because the threat of subsidized competition constantly looms, if they sign the waiver. It should be pointed out, however, that there is no record of the transit districts ever exercising their waiver rights. In other words, in instances when an operator signed the waiver, neither transit districts has stepped in to offer competitive services.

The Commuter/Express Bus Study Working Group has approved a policy recommendation to the PUC to stop attaching such waiver provisions in future certificates.

The question of whether a private operator needs a PUC certificate to run certain public agency routes relates to the contracting authority of the public agencies. The transit districts, in their enabling legislations, have designated territorial rights. They are outside the purview of the PUC. They do have the right to contract out certain services.

In practice, there are mixed reports on the need for a PUC certificate. In the San Francisco Bay Area, Golden Gate Transit contracts out its club bus program to private operators who do not have certificates for their routes. On the other hand, the Channel Islands Bus System (Westways) was required to obtain a certificate to operate a contracted route for the County of Ventura.

The need for a PUC certificate may be a minor point, in as much as the PUC puts a high priority on an applicant proposing service under contract with a public agency. This generally means a shorter processing period.

Implementation is invariably tied to funding. The issues of contracting authority and labor impacts may perhaps be made clear if federal and state funds were not channeled for particular recipients and purposes. For example, TDA funds for Southern California are given to designated operators under a formula allocation. An organization such as Commuter Computer, which has fewer restrictions on labor and contracting, is not a designated recipient.

A transit operator will tend to spend subsidies on operations, rather than on marketing. There is a greater propensity to use the funds for internal activities, rather than to distribute them to external contractors. Obstacles for increased funding of private commuter operations exist in two areas - at the front end coming from the funding source and at the user end where the funds are spent.

Opportunities for gaining enormous savings with the increased use of private operators are constrained by existing labor contracts. SCRTD's labor contract with UTU protects the driver force against the adverse

impacts of sub-contracting. The hiring of new employees may not even be reduced as a result of "subcontracting for para-transit programs". At a time when district hiring is not rising significantly, it may be difficult to add new services operated by private carriers.

An area where some immediate results can be achieved is in the coordination of public and private operations. There are currently no transfer arrangements favoring the private commuter bus rider. Facilities such as park-and-ride lots can be shared. The promotion of commuter bus routes can be piggy-backed with district marketing, at little additional costs. Additionally, in the planning of new services in major corridors, the role of the private bus operators should be considered, rather than be totally ignored, as is done today.

5.1 SERVICE LEVEL/SUBSIDY TRADEOFFS

With public transit operators facing conflicting needs to expand service yet decrease subsidies, the economic benefits of expanding private carrier service should be seriously explored. The subsidy per passenger of the RTD 700 series is four times the system average and more than ten times the amount of some buses which operate in dense residential areas. As an example, data compiled in 1979 by RTD showed a subsidy per passenger of \$.12 for the Wilshire Boulevard local line (Line #83) while the Park-n-Ride line to Diamond Bar (#752) was \$2.07.

If some of the current public commuter/express lines were converted to private carriers, the public operator could make the choice to expand local service in areas with high residential density (and many transit dependents) or to reduce the total system subsidy. Similarly, expansion of commuter/express bus service through private carriers would have little or no effect on the existing budgets of the public operators. Either option allows the public operator to improve service for the entire region without adding any strain on the operating budget.

5.2 IMPACTS OF SCENARIOS

The five basic scenarios have impacts on economics, service levels, and ridership that are potentially quite significant. While current institutional and legislative conditions make some of these scenarios very difficult to achieve, the benefits may be worth the effort. Exhibit V-1 summarizes these impacts for each of the scenarios.

5.2.1 Scenario 1 - Expansion of Public Commuter Bus Services

This scenario is basically status quo where the public operators will continue to expand their commuter/express bus services. Using the prototypical bus line from Section III as a guide, subsidy per trip for a new service would be on the order of \$2.16.

With the forecasted reduction in federal operating subsidies, the public operators may find themselves in a position where expansion of services must be accompanied by a cutback somewhere else. As a result, expansion of commuter services might be curtailed or cutbacks in some local services might be required.

Transit planning under this scenario may require a judgement on the tradeoff between commuter and local service. Commuters generally are deciding between making the trip by auto, carpool/ vanpool, or bus. Their decision will have an impact on freeway congestion during peak periods. Local transit riders, on the other hand, generally have some transit available to them already. This is especially true in the more densely populated areas. Yet many local buses in these areas are severely overcrowded. RTD has identified 38 bus lines which were overcrowded during the fall of 1980.¹ Expansion of public commuter service could very likely preclude the possibility of improving conditions on these overcrowded buses and could require some cutbacks in local services.

5.2.2 Scenario 2 - Expansion of Private Commuter Services - No Public Funds

If all additional commuter services that go into operation over the next few years were to be provided by private carriers, there would be no direct economic impact on the public operators. Since no public funds are involved, the scenario would not be difficult to achieve institutionally. A decision by public carriers not to expand their commuter services could set the stage for this scenario to become a reality.

Private operators may need to change a higher fare than public operators in order to provide a successful service. However, it may also be possible to charge a lower fare for some lines as the economic evaluation indicates.

It is unlikely that new private bus lines would be started in direct competition with existing public lines. Therefore, no riders on the new lines would be induced from public transit. Public transit ridership, then, would not be adversely affected by the addition of new private commuter bus lines. In fact some local buses, especially around the central business district, may see an increase in ridership as new transit commuters make use of them for short trips during the day.

The net impact of this scenario, then, is that new commuter services can be implemented and new transit riders generated with no adverse impacts on public operators.

5.2.3 Scenario 3 - Expansion of Private Commuter Services - With Public Funds

Under this scenario, some public money would be provided to assist the private carrier in implementing new commuter/express bus service. This assistance would amount to a much lower level than the \$2.16 per trip in Scenario 1 while helping to ensure the success of the new service.

With public assistance in marketing, or in actual operating subsidies, the fares could be held at a minimum and ridership could be maximized. Thus, by spending far less than under Scenario 1, a high level of expansion can be achieved with maximum ridership potential.

¹ Short Range Transportation Plan, SCRTD, January 1981.

a. Marketing/Promotional

Public assistance in marketing and promotion does not constitute a direct subsidy to the private carrier. Therefore, there are no real institutional barriers to this implementation of this scenario. In fact, the regional ridesharing program together with Commuter Computer already have the capacity to provide this kind of assistance to private carriers today.

This scenario implies a high degree of cooperation by public agencies in disseminating information for the private carriers. While the cooperation can be quite effective in enhancing the success of new private services, it is a relatively small expense. Thus at a minimal expense, public operators can provide assistance that will greatly enhance the success of new private services.

b. Operations Contracts

As Exhibit III-1 shows, operating costs for private carriers are nearly fifty percent less than for public operators. As a result public operators can contract with private carriers to provide bus services at the public fare rate and subsidize any loss to the private carriers at a cost of about one tenth the cost of operating the service themselves. Under this scenario, the public operator retains some control over the service level provided while keeping the subsidy level very low.

This cost savings significantly reduces the financial strain associated with full public operations (Scenario 1) and at the same time allows the public operator to control the planning and implementation of new services.

Both SCRTD and OCTD have clauses in their enabling legislation which give them the authority to contract for service if it does not adversely impact their labor force. However, a major policy shift would be necessary before either district would act in this manner. The districts have a mandate to provide this type of service to their defined geographic areas and are therefore hesitant to ask any outside operator to provide service.

With the need for budget cutting measures facing the public operators, this scenario provides the opportunity to control expansion of service and yet minimize the cost. It could be a very desirable option in the next few years.

5.2.4 Scenario 4 - Replacement of Public Operations by Private Companies - No.Public.Funds

This scenario has many institutional and regulatory barriers, yet at the same time contains great economic benefits to the region. The economic analysis indicates that over five million dollars in annual operating subsidies could be eliminated by converting fourteen SCRTD and OCTD bus lines to private carriers (see Exhibit III-6).

The barriers to this scenario have to do with the responsibility of transit districts to provide the service and the labor problems associated with conversion. By converting to private carriers, the districts lose a

certain amount of control over the future of the services they currently provide. The conversion also has the potential to reduce the number of operators used by the districts which will be strongly opposed by the unions.

A resolution to the problem of control of the services could be negotiated during the PUC certification process where the private carriers could make certain commitments to the districts. The problem of labor security could be resolved by expanding local services and reassigning commuter/express operators to the new local lines.

The primary benefit of this scenario is that current operating subsidies can be re-programmed to expanding local services without reducing commuter/express service. Service levels on overcrowded buses can be improved without sacrificing other services. There is the potential for some loss in express ridership, however, as fares might increase in some cases and frequencies might be reduced in others when private carriers attempt to operate at a profit.

Another benefit that could be obtained is the actual reduction in operating subsidies. This could be accomplished by converting commuter/express services to private carriers and not reprogramming the money. This can help meet the budget constraints resulting from lost federal subsidies.

5.2.5 Scenario 5 - Replacement of Public Operations by Private Companies - with Public Funds

This scenario has a major benefit over Scenario 4 in that public assistance in converting to private operations would assist greatly in achieving a smooth transition. Any loss in ridership due to the conversion could be minimized or even eliminated at a very low cost to the public. As with Scenario 4, conversion of express service to private operators would probably require a reallocation of the subsidies to expanded local service in order to maintain the size of the labor force. A final benefit of this scenario is that public support could be limited to converted express services. No precedent would be set to provide the same support to any new private services or to support existing private services.

a. Marketing/Promotional

The amount of money that would be required for public agencies to assist in the marketing and promoting private carriers is very small. Since schedules and other marketing items are already being produced for these lines, it may be possible for the public agencies to continue to market these lines after the conversion with no impact on their marketing budgets.

The benefits derived from this marketing/promotional effort will be a very smooth transition from public to private operations. With proper publicity and support from such agencies as SCRTD, OCTD and Commuter

Computer, the conversion could be perceived by the public as creating no discontinuity whatever in service.

b. Operations Contracts

As stated earlier, the enabling legislation for both SCRTD and OCTD allow the districts to contract for service if it does not adversely impact their labor force. Again, the major obstacle to this scenario, as in Scenario 3b, is the policy shift required of the transit districts.

The cost of this scenario is still far below the current level of operating subsidy for commuter/express service. Subsidizing only those individual lines evaluated in this report which have a less than a six percent profit under private operations would cost SCRTD about \$540,000 a year. This is about twelve percent of the current operating subsidy for those lines and results in a savings of \$3.9 million a year.

At a cost of about twelve percent of the current situation, then, SCRTD could convert nine express bus routes to private operations with absolutely no change in service or ridership. For some converted lines, the farebox recovery would be high enough to actually reduce fares. This would induce additional riders to those lines and might increase the level of service. The end result would be an increase in commuter/express ridership, continue all service at least at current levels, and save SCRTD nearly four million dollars a year in operating subsidies.

In all probability, the subsidy saved would be reallocated to expanded local service so that the labor force would not be adversely affected. This, in turn, would increase ridership on local services. Since local ridership per dollar of subsidy is much higher than for express service, the increase in ridership for this scenario could be higher than the total ridership of commuter/express bus service.

EXHIBIT V-1
EVALUATION OF ALTERNATIVE
PUBLIC/PRIVATE SCENARIOS

SCENARIO	SYSTEM IMPACTS	
1. Expansion of Public Commuter Bus Ser- vices	Economic Service Level Ridership Net Impact	Subsidy increases of \$2.16 per trip Possible cutbacks in other services to avoid net increase in subsidies. Increase in express ridership, possible decrease in other services due to cutbacks. Increase in express service will add strain to budget. Cutting back other services to avoid net subsidy increase may result in a net decrease in total system ridership.
2. Expansion of Private Commuter Service Without Public Funds. Public Service Re- mains Constant.	Economic Service Level Ridership Net Impact	No impact on public budgets. Private fares might be higher than public fares. Increased express service and geographic coverage, no impact on existing service. Increase in express trips; increase in local trips in CBD as new transit users make additional trips. Increase in total transit use with no subsidy increase. Possible increase in public revenues due to increase in local trips.
3. Expansion of Private Commuter Services With Public Funds. Public Service Re- mains Constant.	Economic Service Level Ridership Net Impact	Public assistance will keep fares down. Cost is less than for public expansion. Reduced necessity of cutbacks to balance budgets. Higher than in Scenario 2. Higher ridership than Scenario 2 at a cost much less than Scenario 1.
a. Only Marketing Pro- motional Activities Publicly Funded	--	Success of private service is enhanced and fares reduced at minimal public expense. Cutbacks in other services are min- imized. Ridership probably greater than Scenario 2, but less than Scenario 1.
b. Operations Con- tracts Publicly Subsidized.	--	With a subsidy per trip much less than for Scenario 1, the same number of express trips can be served. This reduces the amount of service reduction that may be required.
4. Replacement of Public operations by Private Com- panies-Without Public Funds Existing Level of Service Is Main- tained.	Economic Service level Ridership Net Impact	Reduction in subsidy of \$2.16 per trip, express fares may increase somewhat. Higher sensitivity to ridership for private express service. Less productive routes may be cut back. Express subsidies could be re- allocated to expanding local service in densely populated areas. Local service expansion could add more local trips than the number of lost express trips. Net increase in transit ridership with a significant decrease in subsidy.

EXHIBIT V-1 (cont'd)
EVALUATION OF ALTERNATIVE
PUBLIC/PRIVATE SCENARIOS

SCENARIO	Economic Service Level Ridership Net Impact	SYSTEMS IMPACTS
5. Replacement of Private Operations by Private Companies - With Public Funds Existing Level of Service is Maintained		Public subsidy could guarantee no increase in fares. Cutbacks in express service might not be required. Subsidy saved could be reallocated to expanding local bus service. Conversion could be accomplished with little or no loss in express ridership. Transition to private operations could be smooth with little or no loss in express ridership and perhaps no change in the level of service.
a. Only Marketing Promotional Activities Publicly Funded	--	The efforts of public agencies would greatly improve the possibility of a smooth transition from public to private operations. Some express service cutbacks and, perhaps fare increases might still result.
b. Operations Contracts Publicly Subsidized	--	Subsidizing private operations could ensure that service levels and fares do not change, thus ensuring no loss in ridership. Both cost and ridership are greater than Scenarios 4 and 5a.

6.0 CONCLUSIONS AND POLICY RECOMMENDATIONS

The findings that are summarized in this report are very significant and point toward the need for rapid policy actions by transportation planning and operating agencies in the region. Policy recommendations which the Commuter/Express Bus Task Force approved are as follows:

- All transit districts and municipal operators in the region should review their commuter/express bus operations and determine the potential cost savings to be achieved by conversion to private operations.
- All transit, district municipal operators and planning agencies in the region should take immediate steps to remove any institutional barriers to converting to private operations, including pressing for new state or federal legislation, if required.
- All transit districts and municipal operators in the region should cooperate to the fullest extent possible with private operators to make private service a part of the regional transit service. This could include (a) dissemination of schedules and other operating data and (b) transfer discounts.
- All transit districts and municipal operators should promote the expansion of private commuter/express bus operations by (a) not contesting PUC certificate applications unless the proposed service would have a serious negative impact on the public system, (b) not expanding public commuter/express services in areas where private operations appear feasible, and (c) assisting private operators in identifying new commuter/express bus markets.
- Expansion of privately operated services will need promotional, informational and coordinative support which might well be provided by Commuter Computer.

This report documents the potential economic advantages of giving the private bus operator a much larger role in providing commuter/ express services. Rapid implementation of these recommendations can result in an increase in transit services while reducing annual operating subsidies paid by the public.

APPENDIX A
INVENTORY OF COMMUTER BUS SERVICES

INVENTORY OF PRIVATE COMMUTER BUS SERVICES (1)

Destination Area	Origin Area (2)	Rtes (if more than 1)	Bus Operator
Canoga Park/ Warner Center	Culver City El Segundo Downey Downtown La	2	Antelope Valley Bus, Inc. Commuter Bus Lines Commuter Bus Lines Com-Bus
Santa Clarita Valley	Santa Paula Downtown LA		Antelope Valley Bus, Inc. Commuter Bus Lines
	Lancaster Burbank		Antelope Valley Bus, Inc. Antelope Valley Bus, Inc.
Palmdale	Mission Hills Burbank El Segundo		Antelope Valley Bus, Inc. Antelope Valley Bus, Inc. Antelope Valley Bus, Inc.
Edwards AFB/ Rocket Base	Palmdale Quartz Hill Lancaster	10	Antelope Valley Bus, Inc. Antelope Valle Bus, Inc. Antelope Valley Bus, Inc.
Burbank	Santa Clarita Valley Lancaster	2	Antelope Valley Bus, Inc. Antelope Valley Bus, Inc.
West La/ Westwood/Century City	Thousand Oaks Canoga Park South Gate Tustin Mission Viejo	2	Commuter Bus Lines (Buspool) Com-Bus Com-Bus Com-Bus Com-Bus
West LA/ Santa Monica	Newbury Park Whittier Pomona Huntington Beach	2	Commuter Bus Lines Commuter Bus Lines Commuter Bus Lines Commuter Bus Lines
Downtown LA	Thousand Oaks (3) Thousand Oaks Huntington Beach Tustin Costa Mesa Thousand Oaks		Commuter Bus Lines Gene Stich/Challenger Coach Com-Bus Com-Bus American Charter Conejo Coach

- (1) These are the routes which have been authorized by the California Public Utilities Commission.
- (2) Intermediate pick-up points are not listed.
- (3) This route actually provides service to the Mid-Wilshire area of Los Angeles rather than downtown LA.

continued....

Destination Area	Origin Area (2)	No. of Rtes (if more than 1)	Bus Operator
Culver City	Canoga Park		Antelope Valley Bus, Inc
South Bay (includ- ing Westchester and Redondo Beach)	Chatsworth Chatsworth Northridge Northridge		Antelope Valley Bus, Inc Com-Bus Com-Bus Commuter Bus Lines (Buspool)
	Canoga Park/Woodland Hills Canoga Park	5	Com-Bus Antelope Valley Bus, Inc
	Lancaster		Antelope Valley Bus, Inc
	Palos Verdes San Bernardino		Com-Bus Commuter Bus Lines (Buspool)
	E. Anaheim* Anaheim Buena Park* Cypress* Seal Beach* Huntington Beach* Costa Mesa Orange Orange Orange/Tustin	2 3 3	Commuter Bus Lines Hunt Transportation Commuter Bus Lines Commuter Bus Lines Commuter Bus Lines Commuter Bus Lines Commuter Bus Lines Hunt Transportation Sundance Lines Com-Bus
	Irvine Irvine Mission Viejo* Mission Viejo		Hunt Transportation Com-Bus Commuter Bus Lines Com-Bus
Hawthorne	Thousand Oaks Chatsworth Northridge Canoga Park Lancaster Fullerton Huntington Beach Santa Ana Irvine El Toro Mission Viejo	2 2	Com-Bus Com-Bus Com-Bus Com-Bus Antelope Valley Bus, Inc Com-Bus Com-Bus Hunt Transportation Hunt Transportation Hunt Transportation Com-Bus

* Commuter Bus lines routes to El Segundo, Long Beach, and Downey from Orange County are authorized under broad authority which allows the company to start routes anywhere in most of Orange County. The routes listed in the charts are routes which are currently operating.

continued....

Destination Area	Origin Area (2)	No. of Rtes (if more than 1)	Bus Operator
Long Beach	San Fernando Valley		Commuter Bus Lines
	Santa Monica		Commuter Bus Lines
	Riverside	2	Commuter Bus Lines
	La Habra*		Commuter Bus Lines
	Huntington Beach*		Commuter Bus Lines
	Costa Mesa*		Commuter Bus Lines
	El Toro*		Commuter Bus Lines
	Mission Viejo*		Commuter Bus Lines
Downey	Chatsworth		Commuter Bus Lines
	Canoga Park		Commuter Bus Lines
	Mira Loma		Commuter Bus Lines
	Anaheim Hills*		Commuter Bus Lines
	Huntington Beach*		Commuter Bus Lines
	Mission Viejo*		Commuter Bus Lines
Barstow	San Bernardino		Breland
FT. Irwin	Barstow		Ft. Irwin Buspool
E. Anaheim	Long Beach		Commuter Bus Lines
	South Gate		Commuter Bus Lines
Fullerton	Riverside		Hunt Transportation
Huntington Beach	Canoga Park	2	Com-Bus
	Granada Hills		Com-Bus
	Pacific Palisades		Commuter Bus Lines
	Santa Monica	2	Commuter Bus Lines
	Santa Monica		Mark IV
	Mar Vista		Mark IV
	West LA		Mark IV
	Culver City		Mark IV
	Fairfax		Mark IV
	Torrance		Com-Bus
	Mission Viejo		Commuter Bus Lines
Seal Beach	Downey		Commuter Bus Lines
Santa Ana	Lincoln Heights		Commuter Bus Lines
Irvine/Newport Beach	Riverside		Commuter Bus Lines

* Commuter Bus lines routes to El Segundo, Long Beach, and Downey from Orange County are authorized under broad authority which allows the company to start routes anywhere in most of Orange County. The routes listed in the charts are routes which are currently operating.

continued.....

Destination Area	Origin Area (2)	Rtes (if more than 1)	Bus Operator
San Onofre	Gardena		Getaway Lines
	Long Beach		Getaway Lines
	Bellflower		Sunday Bus Lines
	Lakewood		Orange Blossom Lines
	Diamond Bar		Orange Blossom Lines
	Corona		Sunday Bus Lines



PRIVATE SECTOR COMMUTER/ EXPRESS BUS SERVICE

- | | | |
|-------------------------------------|-------|---|
| DESTINATION AREA | | SOUTHEAST ORANGE COUNTY |
| LONG BEACH | ----- | IRVINE: SANTA ANA |
| SOUTH BAY | ----- | SAN GABRIEL VALLEY |
| WEST LA | ----- | HUNTINGTON BEACH |
| EAST SAN FERNANDO VALLEY | ----- | ANTELOPE VALLEY (PALMDALE, EDWARDS AFB) |
| DOWNTOWN LA | ----- | DOWNEY NORWALK |
| NORTHEAST ORANGE COUNTY (ANAHEIM) | ----- | BARSTOW |
| NORTHWEST ORANGE COUNTY (FULLERTON) | ----- | SAN ONOFRE |



January 1982

INVENTORY OF PUBLIC COMMUTER/EXPRESS BUS SERVICES

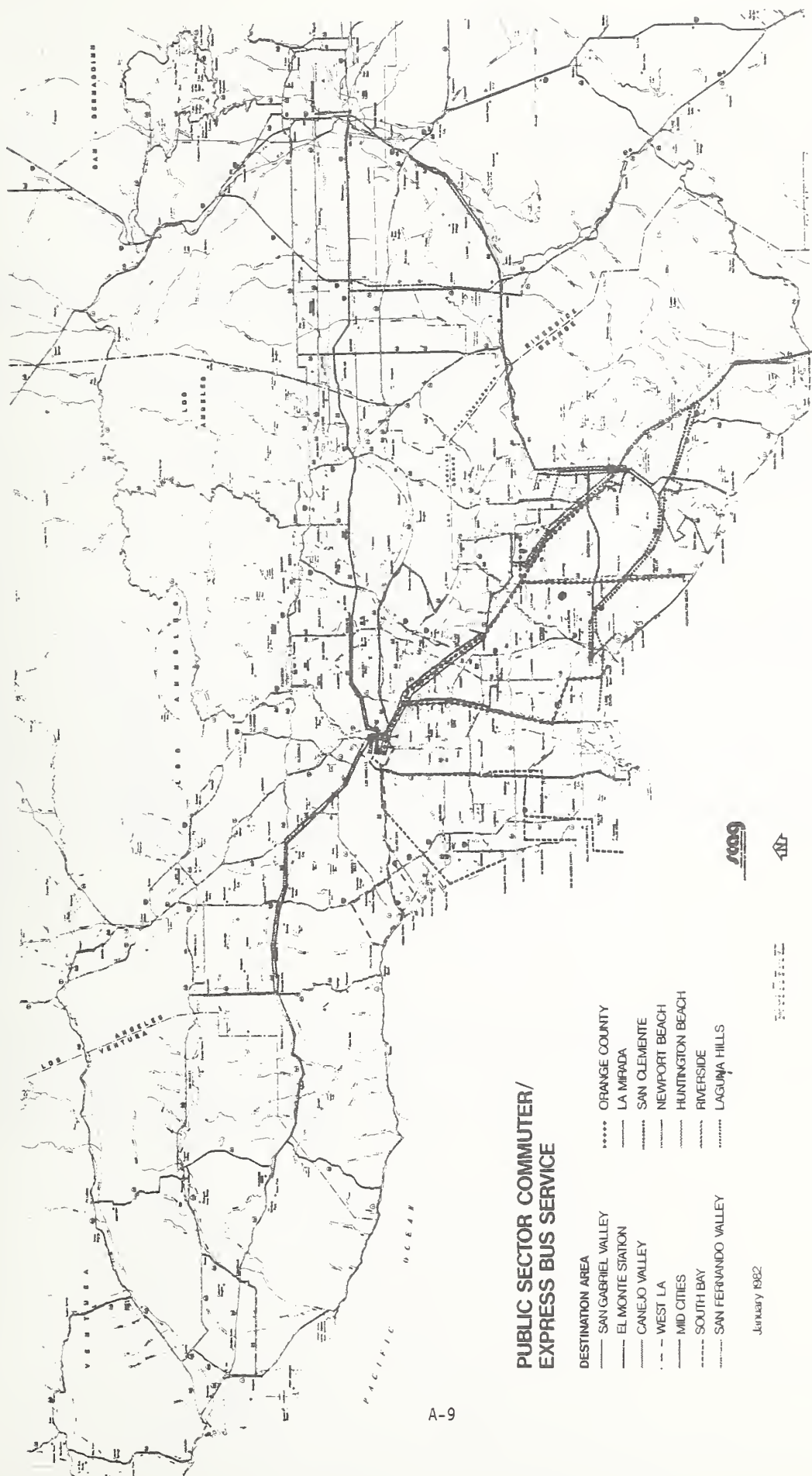
Origin Area	Destination Area	Bus Operator/Route Number
Los Angeles	SG Valley/Pomona	SCRTD/480
Los Angeles	SG Valley/El Monte Station	SCRTD/481
Los Angeles	SG Valley/El Monte	SCRTD/482
Los Angeles	SG Valley/El Monte Station	SCRTD/483
Los Angeles	SG Valley/El Monte Station	SCRTD/484
Los Angeles	SG Valley/Altadena	SCRTD/485
Los Angeles	SG Valley/El Monte Station	SCRTD/486
Los Angeles	SG Valley/San Gabriel	SCRTD/487
Los Angeles	SG Valley/El Monte Station	SCRTD/488
Los Angeles	SG Valley/San Gabriel	SCRTD/489
Los Angeles	SG Valley/El Monte Station	SCRTD/490
Los Angeles	SG Valley/El Monte Station	SCRTD/491
Los Angeles	SG Valley/El Monte Station	SCRTD/492
Los Angeles	SG Valley/El Monte Station	SCRTD/493
Los Angeles	SG Valley/El Monte Station	SCRTD/494
Los Angeles	SG Valley/El Monte Station	SCRTD/495
Los Angeles	SG Valley/Glendora	SCRTD/760
Los Angeles	SG Valley/Chino	SCRTD/762
Los Angeles	SG Valley/Montclair	SCRTD/764
Los Angeles	SG Valley/Pasadena	SCRTD/770
Los Angeles	SG Valley/San Marino	SCRTD/507
Los Angeles	West LA/Sunset Blvd	SCRTD/601
Los Angeles	West LA/Westwood	SCRTD/602
Los Angeles	West LA/Venice Blvd.	SCRTD/604
Los Angeles	West LA Marina Del Rey	SCRTD/605
Los Angeles	West LA/Redondo Beach	SCRTD/607
Los Angeles	West LA/Pacific Palisades	SCRTD/608
Los Angeles	West LA/Santa Monica	SMMBL/10
Los Angeles	Orange/Seal Beach	SCRTD/755
Los Angeles	Orange/Fullerton	SCRTD/757
Los Angeles	Orange/La Mirada	SCRTD/758
Los Angeles	Orange/Santa Ana	SCRTD/800
Los Angeles	Orange/Fullerton/La Mirada	SCRTD/501
Los Angeles	Orange/Huntington Beach	SCRTD/503
Los Angeles	Ventura/Thousand Oaks	SCRTD/504
Los Angeles	Mid-Cities/Bellflower	SCRTD/455
Los Angeles	Mid-Cities/Norwalk	SCRTD/801
Los Angeles	Mid-Cities/Whittier	SCRTD/508

INVENTORY OF PUBLIC COMMUTER/EXPRESS BUS SERVICES (CONTINUED)

Origin Area	Destination Area	Bus Operator/Route Number
South Bay/Hawthorne	Los Angeles	SCRTD/442
South Bay/Manhattan Beach	Los Angeles	SCRTD/606
South Bay/Redondo Beach	Los Angeles	SCRTD/607
South Bay/San Pedro	Los Angeles	SCRTD/737
South Bay/San Pedro	Los Angeles	SCRTD/810
South Bay/Marineland	Los Angeles	SCRTD/813
South Bay/Palos Verdes	Los Angeles	SCRTD/814
South Bay/Rolling-Hills	Los Angeles	SCRTD/509-1
South Bay/Rolling-Hills	Los Angeles	SCRTD/509-3
South Bay/Torrance	Los Angeles	TMT/1
South Bay/Gardena	Los Angeles	GMT/1
SF Valley/Chatsworth	Los Angeles	SCRTD/511
SF Valley/Woodland Hills	Los Angeles	SCRTD/505-1
SF Valley/Canoga Park	Los Angeles	SCRTD/505-2
SF Valley/Canoga Park	Los Angeles	SCRTD/716
SF Valley/Van Nuys	Los Angeles	SCRTD/721
Orange/Fullerton	San Clemente	OCTD/201
Orange/Anaheim	San Clemente	OCTD/202
Orange/Long Beach	San Clemente	OCTD/203
Orange/Newport Center	San Clemente	OCTD/206
Orange/CSUF	San Clemente	OCTD/209
Orange/Santa Ana	San Clemente	OCTD/291
Orange/Fullerton	Newport Beach	OCTD/204
Orange/Long Beach	Laguna Hills	OCTD/205
Orange/Anaheim	Huntington Beach	OCTD/208
Orange/Huntington Beach	Riverside	OCTD/256
Orange/Santa Ana	Riverside	OCTD/260

NOTES:

SCRTD Southern California Rapid Transit District
 OCTD Orange County Transit District
 SMMBL Santa Monica Municipal Bus Lines
 TMT Torrance Municipal Transit
 GMT Gardena Municipal Transit



PUBLIC SECTOR COMMUTER/ EXPRESS BUS SERVICE

- | | |
|-------------------------|---------------------|
| DESTINATION AREA | ORANGE COUNTY |
| — SAN GABRIEL VALLEY | — LA MIRADA |
| — EL MONTE STATION | — SAN CLEMENTE |
| — CANEJO VALLEY | — NEWPORT BEACH |
| — WEST LA | — HUNTINGTON BEACH |
| — MID CITIES | — RIVERSIDE |
| — SOUTH BAY | — LAGUNA HILLS |
| — SAN FERNANDO VALLEY | |

January 1982



Metropolitan Transportation Authority
Southern California Edison Company

APPENDIX B

CALCULATION OF PUBLIC OPERATING COSTS

FY 1982 operating costs for 22 bus lines were calculated using the following two models:

$$\begin{aligned}\text{SCRTD: } \text{OC} &= 27.90 \text{ (VH)} + 1.22 \text{ (VM)} + 27,268 \text{ (PV)} \\ \text{OCTD: } \text{OC} &= 20.55 \text{ (VH)} + 0.93 \text{ (VM)} + 25,901 \text{ (PV)}\end{aligned}$$

Attached is a table giving the operating assumptions that went into the above equations. The process that was used to derive these operating assumptions was as follows:

- (1) Estimate annual revenue miles as of 7/1/81 by multiplying the average one way route miles by the scheduled number of trips.
- (2) Based on documented operating data provided by SCRTD¹ and OCTD², calculate the ratio of scheduled revenue to documented revenue miles.
- (3) Calculate total annual miles and hours by multiplying the documented miles (hours) by the ratio calculated in Step 2.
- (4) Exceptions were made for SCRTD lines 760, 762, and 764. No ridership data has been collected for these lines since the latest service level change. Therefore, the operating assumptions for these lines represent early 1980 service levels for which ridership data was collected.
- (5) The vehicles hours documented for SCRTD line 716 appeared to be inconsistent with mileage. Therefore, the annual vehicles hour figure was based on the published schedule. The ratio of 1.93 vehicle hours per revenue hour (taken from the 4-24 report for line 716) was used in this process.

1."Scheduled Service Operating Cost Factors Effective September 14, 1980", SCRTD Report 4-24.

2."Service Improvement Program: February, 1981 Addendum, Major Route Profile Changes" OCTD, November, 1980.

OPERATING ASSUMPTIONS USED IN COST CALCULATIONS

BUS LINE	ONE WAY ROUTE MILES	ONE WAY ROUTE TIME	DAILY TRIPS IN/OUT	PEAK PERIOD VEHICLES	ANNUAL REVENUE MILES	ANNUAL VEHICLE MILES	ANNUAL VEHICLE HOURS
501	28.6	73.0	1/1	1	14,586	29,428	1,057
503	35.5	68.0	1/1	1	18,105	28,815	895
504	40.3	75.0	1/1	1	20,553	48,985	1,483
505	27.5	76.0	3/3	3	42,228	68,196	3,266
507	18.5	50.0	1/1	1	9,435	20,442	876
508	30.3	56.0	1/1	1	15,453	31,159	1,026
509	31.1	70.0	2/2	2	31,722	63,664	2,082
511	29.6	62.0	1/2	1	15,096	22,516	855
716	30.3	71.4	6/6	6	92,718	225,672	7,035
721	31.2	72.7	12/12	12	190,944	314,624	12,263
737	23.2*	62.1*	5/5	4	59,109	110,181	4,223
755	31.4*	76.2*	13/13	11	207,917	358,657	13,613
757	21.9	50.7	20/19	13	217,796	477,731	17,130
758	21.7	59.3	8/8	6	88,536	254,572	9,364
760	26.4*	53.5*	16/15	13	208,692	427,196	14,521
762	42.9*	80.3*	12/11	10	251,609	422,103	14,510
764	37.7*	71.2*	9/8	9	163,430	274,488	8,836
201	43.1	88.3	2/2	2	43,962	95,949	2,939
203	52.2	70.5	4/3	4	89,339	142,639	4,511
204	23.9	70.5	1/1	1	12,189	35,786	1,697
209	42.0	76.3	2/2	2	42,840	52,421	1,645
291	30.2	56.5	2/2	2	30,804	71,206	2,368

* Average of regular and cutback runs

APPENDIX C

INSTITUTIONAL AND REGULATORY ASPECTS
OF THE ALTERNATIVE OPERATING SCENARIOS

The following pages represent comments made by the Commuter/Express Bus Working Group during discussions about the five operating scenarios. A separate page has been provided for each scenario.

Scenario 1

Expansion of Public Commuter Bus Services

Description

Under this scenario public commuter express bus services would continue to expand and compete with private sector operations. SCRTD and OCTD will increase express and park and ride services with the addition of more buses for more frequent bus trips and a greater geographical coverage.

Questions Relating to Institutional and Regulatory Aspects

1. What specific California PUC regulations and practices relate to this scenario? Highlight potential problem areas and opportunities for improvement.

- PUC leaves privates particularly vulnerable to public enroachment
by granting waivers in certificates.

2. What specific provisions in transit district legislation concern public/private operator relationships? Highlight potential problem areas and opportunities for improvement.

- None

3. What specific provisions in transit district collective bargaining agreements impact public/private operator relationships?

- Limitations on district hiring part time drivers - keeps costs high.

4. What specific federal labor protection stipulations (for example, UMTA Sec. 13c) relate to this scenario?

- Possibility exists for private transit workers to file under 13(c).

5. Any additional comments?

- Negotiations necessary to determine who pays how much for service
crossing county/district boundaries.

Scenario 2

Expansion of Private Commuter Services: No Public Funds

Description

Under this scenario, private commuter/express services are expanded, while public transit operations are maintained at current levels. No public funds are used to expand private commuter/express services although perhaps some legal/regulatory measures might facilitate this happening.

Questions Relating to Institutional and Regulatory Aspects

1. What specific California PUC regulations and practices relate to this scenario? Highlight potential problem areas and opportunities for improvement.

- Waivers are a problem as in Scenario 1.

2. What specific provisions in transit district legislation concern public/private operator relationships? Highlight potential problem areas and opportunities for improvement.

- "Buy Out" provision in Orange County
- District authority

3. What specific provisions in transit district collective bargaining agreements impact public/private operator relationships?

- As private sector grows, labor conditions will change.

4. What specific federal labor protection stipulations (for example, UMTA Sec. 13c) relate to this scenario?

- None

5. Any additional comments?

- Coordination among multitude of independent operators will require institutional changes. Information, route and schedule

3A) \$ for Marketing, info only

3B) \$ for operation

Scenario 3

Expansion of Private Commuter Services: With Public Funds

Description

Under this scenario, public funds will be used to contract with private operators to expand commuter/express bus services. Public transit operations are maintained at current levels.

Questions Relating to Institutional and Regulatory Aspects

1. What specific California PUC regulations and practices relate to this scenario? Highlight potential problem areas and opportunities for improvement.

A.	● Only normal certification process with high PUC priority	B.	● Major question of authority of transit district vis-a-vis PUC in contracting.
	● Waiver Provision		● PUC would give high priority.

2. What specific provisions in transit district legislation concern public/private operator relationships? Highlight potential problem areas and opportunities for improvement.

No problems/Really same scenario as #2.	● Contracting authority?
	● Allocation of funds through district or county commission?
	● Fare box recovery/performance/etc. related to fund source (SB-620) const.

3. What specific provisions in transit district collective bargaining agreements impact public/private operator relationships?

No problems	Not potential problem as long as \$ flow through commissions, not districts; and...
	as long as transit districts don't lay off at the same time.

4. What specific federal labor protection stipulations (for example, UMTA Sec. 13c) relate to this scenario?

No problems	No problem as long as there is no negative impact on district workers.

5. Any additional comments?

● Gives full flexibility to privates	● State lift equipped (E&H) bus regs may apply
● Recipe or formula for info/mkt. \$.	
● Insurance liab. of district?	
● "Seed Money" alternative needed	● Feeder services
● Park and Ride lots	● Park and Ride lots
● Coordination of Services	● Coordination of Services (transfers)

Scenario 4

Replacement of Public Operations by Private Companies: No Public Funds

Description

Under this scenario, current public transit express/commuter routes are transferred to private operators. No public funds are supplied and existing service levels are maintained.

Questions Relating to Institutional and Regulatory Aspects

1. What specific California PUC regulations and practices relate to this scenario? Highlight potential problem areas and opportunities for improvement.
 - Waiver provision
 - PUC certificate regulations (entrance - exit)
2. What specific provisions in transit district legislation concern public/private operator relationships? Highlight potential problem areas and opportunities for improvement.
 - Reallocation of transit district resources - a key issue
3. What specific provisions in transit district collective bargaining agreements impact public/private operator relationships?
 - None
4. What specific federal labor protection stipulations (for example, UMTA Sec. 13c) relate to this scenario?
 - This may be a problem unless the transit district clearly moves resources to other areas and no public workers are made worse off.
5. Any additional comments?
 - Questions of service/facility comparability (# runs/schedules different).
 - Service coordination.

Scenario 5

5A) Pub. \$ for mkt., info
5B) Pub. \$ for operations

Replacement of Public Operations by Private Companies: With Public Funds

Description

Under this scenario, public funds are supplied to private operators, who will take over existing public express and commuter bus services. Existing service levels are maintained.

Questions Relating to Institutional and Regulatory Aspects

1. What specific California PUC regulations and practices relate to this scenario? Highlight potential problem areas and opportunities for improvement.

A. ● PUC Waiver	B. ● Transit Dist. vs. PUC contract authority
	● PUC gives very high priority.
● PUC control of mkt.	● PUC control of mkt.

2. What specific provisions in transit district legislation concern public/private operator relationships? Highlight potential problem areas and opportunities for improvement.

● None - similar to #4	● Contract authority
	● Allocation of funds
	● Legislative constraints - SB 620

3. What specific provisions in transit district collective bargaining agreements impact public/private operator relationships?

● None - Similar to #4	● May lead to action against transit dist. if workers made worse off.

4. What specific federal labor protection stipulations (for example, UMTA Sec. 13c) relate to this scenario?

● Similar to Scenario #4	● Major problem if \$ through transit dist unless no dist. labor impact.
	● Less problem if \$ through commission - but still significant.

5. Any additional comments?

● Formula or strategy for use of mktg./info funds	● State E&H vehicle regulations
● Coordination	● Coordination - Transfer feeder
● Information	● Information

● Park and Ride lot use

C-6

● Park and Ride lot use

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